



## February 2006 - Health Update

### Constipation

Constipation is a problem of Western cultures and refers to the inability to empty the bowel regularly. The bowel should be emptied between one and three times a day. Less than this is classed as constipation. It is estimated that about 10% of the population in Western communities suffer from this problem. In the developing countries of the world it is virtually unknown.

#### **Dietary Modification**

Fibre, particularly insoluble fibre, is linked with prevention of chronic constipation.<sup>1</sup> Insoluble fibre from food acts like a sponge, pulling water into the stool and making it easier to pass. Insoluble fibre comes mostly from vegetables, beans, brown rice, whole wheat, rye, and other whole grains. Switching from white bread and white rice to wholewheat bread and brown rice often helps relieve constipation. It is important to drink lots of fluid along with the fibre—at least 16 ounces of water per serving of fibre. Otherwise, the fibre may actually worsen the constipation.

In addition, wheat bran may be added to the diet. Doctors frequently suggest a quarter cup or more per day of wheat bran along with fluid. An easy way to add wheat bran to the diet is to put it in breakfast cereal or switch to high-bran cereals. Wheat bran often reduces constipation, although not all research shows it to be successful.<sup>2</sup> Higher amounts of wheat bran are sometimes more successful than lower amounts.<sup>3</sup>

A double-blind trial found that chronic constipation among infants and problems associated with it were triggered by intolerance to cows' milk in two-thirds of the infants studied.<sup>4</sup> Symptoms disappeared in most infants when cows' milk was removed from their diet. These results were confirmed in two subsequent, preliminary trials.<sup>5 6</sup> Constipation triggered by other food allergies might be responsible for chronic constipation in some adults. If other approaches do not help, these possibilities may be discussed with a physician.

#### **Lifestyle Modification**

Exercise may increase the muscular contractions of the intestine, promoting elimination.<sup>7</sup> Nonetheless, the effect of exercise on constipation remains unclear.<sup>8</sup>

#### **Nutritional Supplement Treatment Options**

Glucomannan is a water-soluble dietary fibre that is derived from konjac root. Like other sources of fibre, such as psyllium and fenugreek, glucomannan is considered a bulk-forming laxative. A preliminary trial<sup>9</sup> and several double-blind trials<sup>10, 11, 12, 13</sup> have found glucomannan to be an effective treatment for constipation. The amount of glucomannan shown to be effective as a laxative is 3 to 4 grams per day. In constipated people, glucomannan and other bulk-forming laxatives generally help produce a bowel movement within 12 to 24 hours.

Chlorophyll, the substance responsible for the green colour in plants, may be useful for a number of gastrointestinal problems. In a preliminary trial, chlorophyll supplementation eased chronic constipation in elderly people.<sup>14</sup>

## Botanical Treatment Options

The laxatives most frequently used world-wide come from plants. Herbal laxatives are either bulk-forming or stimulating.

Bulk-forming laxatives come from plants with a high fibre and mucilage content that expand when they come in contact with water; examples include psyllium, linseed, and fenugreek. As the volume in the bowel increases, a reflex muscular contraction occurs, stimulating a bowel movement. These mild laxatives are best suited for long-term use in people with constipation.

Many doctors recommend taking 7.5 grams of psyllium seeds or 5 grams of psyllium husks, mixed with water or juice, one to two times per day. Some doctors use a combination of senna (18%) and psyllium (82%) for the treatment of chronic constipation. This has been shown to work effectively for people in nursing homes with chronic constipation.<sup>15</sup>

Basil (*Ocimum basilicum*) seed has been found to relieve constipation by acting as a bulk-forming laxative in one preliminary study.<sup>16</sup> A similar study showed the seeds to be useful following major surgery for elderly people with constipation.<sup>17</sup> Alginic acid, one of the major constituents in bladderwrack (*Fucus vesiculosus*), is a type of dietary fibre that may be used to relieve constipation. However, human studies have not been conducted on the effectiveness of bladderwrack for this condition.

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Papaya (or *Carica papaya*) is a member of the Caricaceae (Paw Paw) family and native to Central America. The flesh, skin, seeds and stem of the papaya fruit have been used in traditional medicine for many years, for a variety of uses. In fact, the first ever written case of papaya being used for its healthful properties was in 1526. The papaya plant is a rich source of the protein-digesting enzyme, papain, and many papaya products use the milky juice taken from the unripe fruit or stem, where the concentration of papain is highest. However, it is the flesh from the more mature fruit - sometimes called the vitamin and mineral bomb due to its vast nutritive properties - which can provide the widest range of digestive benefits, containing not just papain, but numerous other active components too. Papaya has now been shown in trials to significantly improve the symptoms associated with numerous digestive complaints, in particular constipation.

Stimulant laxatives are high in anthraquinone glycosides, which stimulate bowel muscle contraction. The most frequently used stimulant laxatives are senna leaves, cascara bark, and aloe latex. While senna is the most popular, cascara has a somewhat milder action. Aloe is very potent and should be used with caution. Other stimulant laxatives include buckthorn, alder buckthorn (*Rhamnus frangula*), and rhubarb (*Rheum officinale*, *R. palmatum*).

The unprocessed roots of fo-ti possess a mild laxative effect. The bitter compounds in dandelion leaves and root are also mild laxatives.

## Integrative Options

Anecdotal reports have claimed that acupuncture is beneficial in the treatment of constipation.<sup>18, 19, 20, 21</sup> However, a small, controlled study of eight people with constipation concluded that six acupuncture treatments over two weeks did not improve bowel function during the course of the study.<sup>22</sup> Placebo-controlled trials of longer duration are needed to determine whether acupuncture is a useful treatment for constipation.

Biofeedback techniques have been shown to significantly increase the frequency of bowel movements among women with chronic constipation.<sup>23</sup>

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