Phytotherapeutic Approaches to Lower Bowel Disease

Part II  Constipation, diarrhea, IBS, Diverticular Diseases

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This article is continued from our last issue.

Constipation

This is a condition in which bowel movements occur infrequently, or in which the feces are hard and small, or where the passage of feces causes difficulty or pain. Constipation is a symptom, not a disease, and should be treated as such. Attempts must be made to find out the underlying cause, otherwise treatment will not be effective in the long term, or may cause injury. Ideally the number of bowel movements in a day should be equal to the number of meals eaten the previous day. This is often not the case, but there should be at least one good elimination each day. The stool should be soft but not loose or runny and should break apart a little in the toilet pan. The color will vary somewhat according to the diet but generally should be a uniform light brown.

While occasional constipation (a missed day or two) will not be seriously detrimental to the health, chronic constipation can have significant implications in the body. The bowels are a major channel of elimination and if they are not working adequately then the other channels (kidney, skin and lungs) will have a greater work load. Many metabolites cannot be eliminated by other channels, so if the bowels are incompetent then toxins rapidly accumulate in the body. This may manifest as bad breath, body odor, skin eruptions, visual impairment, headaches, muscle & joint pains and mental confusion. Prolonged constipation may result in absorption of toxins and bacteria from the bowel and has

Pharmacy Gems from William Cook

by Paul Bergner


In this issue we begin a series of columns on the materia medica and pharmacy methods of William Cook, described in his 1869 Physio-Medical Dispensatory. This materia medica of more than 440 plants contains the most complete description of the pharmacy of North American herbs in print. Cook was a hands-on clinical herbalist and herbal pharmacist, and the text carries the authority of first hand knowledge in both arenas. We are in the process of scanning the Dispensatory into web format, and hope to post the complete text at our web site by the end of the year. In this issue, we cover Cook’s views on vinegar tinctures and other vinegar preparations.

Historical context

Thomsonian herbalism, founded by Samuel Thomson, and spreading to England via Albert Coffin, was a movement that was as much anti-medical as it was pro-herb. Its vigorous stance against mercurial poisons and bloodletting was as much responsible for its popularity as was its materia medica and methods of practice. Eventually a split developed in the movement over the issue of medical education for its practitioners. Samuel Thomson was against it, and against granting Thomsonian “licences” to physicians, while his lieutenant Alva Curtis supported such education. Curtis eventually left Thomson in 1839 to found the Literary and Botanico-Medical Institute in Ohio. Thus was born the Physio-medicalist movement, also called

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been associated with diabetes mellitus, meningitis, myasthenia gravis, thyroid disease, auto-immunity, cancer and ulcerative colitis.

There are many possible causes and aggravating factors in constipation. These include:

- Dietary factors such as low fiber, inadequate fluids and excess refined foods.
- Physical inactivity e.g., prolonged bed rest or general lack of exercise.
- Pregnancy.
- Endocrine imbalance such as hypothyroidism, hypopituitarism or phaeochromocytoma.
- Bowel diseases such as diverticulitis, irritable bowel syndrome, or tumors.
- Acute abdominal disease such as peritonitis and appendicitis.
- Nerve disorders e.g., acute injuries to the head or spinal cord; or chronic degenerative conditions such as multiple sclerosis, tumors of the spine or splanchnic nerves that supply the abdominal organs, or cerebral disorders such as stroke, Parkinsonism, or tumors.
- Various drugs such as anesthetics, antacids, anticholinergics, anticonvulsants, antihypertensives antipsychotics, beta-blockers, diuretics, iron, bismuth, muscle relaxants, antispasmodics, opiates, and certain heavy metals like arsenic, lead & mercury.
- Metabolic abnormalities such as hypokalemia, hyperglycemia, or uraemia.
- Psychogenic factors such as stress and nervous tension or emotional disturbances.
- Repeated ignoring of the urge to defecate will result in lack of sensitivity to the need for elimination.
- Repeated use of retention enemas will dilate the colon and make it insensitive to the nerve impulses that occur with dilation and that begin the defecation process.
- Laxative abuse.

**Holistic treatment of constipation**

Before commencing treatment for the constipation itself the causative factors must be identified and treated. Often this is sufficient and the constipation will spontaneously resolve. If treatment is required for the constipation then there are several factors to consider.

**Diet**

Dietary fiber holds water in the colon which makes the stools softer and bulkier. This stimulates the defecation reflex and makes the stools easier to pass. Fiber also tends to hold toxins in the stool and minimize their reabsorption as well as making the transit time faster. Fiber is exclusively found in plant foods (fruits, vegetables, pulses and grains). It does not occur in animal foods. Thus the diet should emphasize vegetable foods and minimize animal foods. Oat bran appears to be the gentlest and most effective form of added fibre to use. 1/4 to ½ cup per day should be added to soups, stews, baking and cooked cereals. Psyllium may also be taken. Raw foods tend to be more stimulating to the colon so should be increased to form at least ½ of the daily intake of food. Plenty of fluids should be taken, 6 - 8 glasses of water per day being ideal. Herb teas would also work but coffee and black tea are constipating and should be avoided.

**Lifestyle**

Adequate exercise is very important to ensure good circulation and muscle tone in the pelvic cavity. Any exercise that gets the legs and pelvis moving will be good: yoga, walking, running, dancing. The exercise should be reasonably vigorous and should last at least 20 minutes 3 or 4 times per week.

The urge to defecate should never be suppressed. To train the bowel to function optimally, it is recommended to develop the habit of going to the bathroom every morning at a regular time regardless of whether the defecation urge occurs. Over time the body will...
learn that this is the time for elimination. Evacuation is easiest in a squatting position which relaxes the pelvic floor muscles. Some countries have toilets designed for this. Where squatting is not possible then it will be helpful to raise the feet on a small stool.

**Laxatives**

Sometimes dietary and lifestyle changes are insufficient to reverse old patterns of constipation and then a laxative may be useful. Care should be taken that the person doesn’t become dependent on the laxative.

Laxatives derive their effects in several ways.

**Hydrophillic and osmotic laxatives** draw water to themselves and hold it in the colon. This serves to soften the stool and give it bulk. Osmotic laxatives may also be called bulking agents or stool softeners. Examples: *Plantago ovata* (Psyllium), *Linum usitatisissimum* (Flax)

**Contact stimulants** irritate the colon wall and cause it to attempt to evacuate the offending substance. Mineral oil and castor oil are the most common of this type of laxative.

**Bowel wall tonics** and **stimulants** promote regular and strong contractions of the colonic musculature. Herbal remedies in this category commonly contain anthraquinone glycosides. Examples: *Rhamnus spp.* (Cascara / Buckthorn), *Cassia spp.* (Senna), and *Bryonia dioica* (White bryony).

**Hepatics, cholagogues** and **choleretics** improve bowel function by activating the liver and gall bladder. This creates a reflex activation of the bowel and also tends to improve the tone of the colon musculature.

There are 4 classes of herbal laxative, each stronger than the last. Only the first 2 are normally used.

**Aperients**
- *Taraxacum officinale* (Dandelion)
- *Arctium lappa* (Burdock)
- *Rumex crispus* (Yellow Dock)
- *Rheum officinarum/palmatum* (Turkey Rhubarb)

**Laxatives**
- Gentle bulking type
  - *Linum usitatisissimum* (Flax/Linseed)
  - *Plantago psyllium* (Psyllium seeds)
- Stronger irritating type
  - *Rhamnus frangula* (Alder Buckthorn)
  - *Rhamnus purshiana* (Cascara sagrada)
  - *Bryonia dioica* (White Bryony)

**Cathartics**
- *Prunus verticillastus* (Black Alder)
- *Cassia angustifolia* (Senna)
- *Ulmus glutinosa* (Alder)

**Purgatives**
- *Aloe africana* (Cape Aloes)
- *Phytolacca decandra* (Pokerooot)

Herbal laxatives of all classes are usually prescribed with a carminative to minimize griping.

Before prescribing a laxative you should attempt to determine whether there is hypertonicity or hypotonicity in the colon. Either situation may lead to constipation but will require different treatment approaches. Lack of exercise, prolonged bed rest or habitual use of laxatives generally leads to a loss of bowel tone (hypotonicity) while stress and nervous tension generally leads to excessive bowel tone (hypertonicity). Hypertonic constipation is more common in younger people while hypotonic constipation is more common in the elderly.

In the hypotonic state, stimulating laxatives and liver and gall bladder remedies may be the most appropriate while in the hypertonic situation you should avoid stimulating the bowel and use, instead, the osmotic bulking agents as well as nervines and muscle relaxants.

Aloe vera gel is a bulk laxative that is very soothing and healing to the entire digestive tract. The aloe plant contains glucomannan a polysaccharide which is the bulking agent. It also contains aloe, aloemodin & barbaloin, anthraquinone-glycosides that are cathartic if used in excess.

Colonic irrigation can be very helpful in retraining the bowel whether it is hypotonic or hypertonic. This procedure can also be useful in assisting the reduction of laxative abuse.

**Procedure for reducing laxative use**

This is a protocol that can be used to assist people who are habitually using commercial laxative as well as those who wish to wean themselves off herbal laxative...
agents. People who have been taking commercial laxatives should switch to an herbal formula for 1 week, the dose depending on their individual requirement to ensure 1 bowel movement a day. After this first week the dosage should be reduced by half for 1 week. Each week thereafter reduce the dosage by half until the amount is so small that you can stop altogether. If constipation recurs at any point then go back to the previous weeks dose for a further week then reduce again.

Diarrhea

This refers to unusually frequent bowel movements, or the passage of abnormally soft or liquid stools. It is often associated with nausea or vomiting and colicky pain. There are many possible types and causes of diarrhea:

Osmotic diarrhea occurs when there is an excess of non-absorbable water-soluble substances present in the bowel leading to retention of water in the stool. Possible causes include lactose intolerance, ingestion of large amounts of sugars, excessive intake of vitamin C, over use of laxatives containing magnesium, phosphate, or sulphate, general nutrient malabsorption and the use of certain antacids containing magnesium. In this type of diarrhea the extent and severity is proportional to the amount of the offending substance ingested and the situation is alleviated by cessation of the intake of the substance.

Secretory diarrhea occurs when the large intestine secretes rather than absorbs electrolytes and water. Possible causes include the presence of bacterial toxins (e.g., from food poisoning or drinking polluted water) where water is required to wash them away; unabsorbed bile acids after ileal resection; certain enterotoxigenic viruses; unabsorbed dietary fats in liver or gall bladder disease; excessive use of anthraquinone cathartics or other irritating laxatives; imbalances of certain hormones such as secretin or calcitonin; or prostaglandin imbalances.

Note that malabsorption syndrome can cause diarrhoea by either of the above mechanisms.

Exudative diarrhea occurs when there is acute or chronic inflammation in the gastro-intestinal tract leading to copious production of inflammatory exudate.

Short transit time will cause diarrhea because there is insufficient time for fluid absorption to occur. The most common causes of this are intestinal resection, which reduces the surface area of the intestines, and stress which speeds up peristalsis.

Diarrhea may also result from anti-biotic use causing the death of commensal bowel flora.

The holistic treatment of diarrhoea

Diarrhea, like constipation, is a symptom not a disease in itself. You must always look for the underlying pathology before attempting to treat the diarrhoea itself.

If the diarrhoea is due to food poisoning or a virus or bacteria then it should be regarded as a cleansing process and should not be suppressed unless very severe or prolonged.

Food allergies, specially lactose or gluten intolerances, are very common causes of chronic low grade diarrhoea. A short fast followed by challenge testing may be employed to determine the type and extent of allergic involvement.

Most cases of diarrhea are simple and self limiting. Minimal interference is the best policy, with simple dietary and herbal remedies usually being adequate. Only if the problem does not resolve within 1 week would you begin to consider other more detailed treatment.

During an acute attack of diarrhoea no solid foods should be taken. There should be a high fluid intake, diluted vegetable juices and broth being the best along with certain herbal teas. If dehydration is feared then the World Health organization recommends the following rehydration formula:

- 3.5 g. sodium chloride
- 2.5 g. sodium bicarbonate
- 1.5 g. potassium chloride
- 20 g. glucose

This is dissolved in 1 liter of water. 1 liter to be taken hourly for dehydration in adults, proportionately less for children. The liquid part of this formula could be made of herbal teas such as Fennel, Peppermint, Chamomile, Lemon Balm, or any other carminative.

When food is reintroduced, it should be low-allergen and easily digested. Vegetable soup, yogurt, cooked fruits, or grated apple are preferred foods. It will be useful to take probiotics and garlic to re-colonize the bowel flora, which may become depleted during diarrhoea.

If it becomes necessary to stop the diarrhoea itself, then astringent herbs may be employed in the form of teas or enemas. Psyllium seeds may also be used to absorb excess water in the colon and thus give solidity to
overly loose stools. In bacterial infections, Hydrastis canadensis and Berberis vulgaris may be useful because of their strong anti-bacterial properties. They both also have a tonic effect on the bowel. A quick and effective remedy to stop acute diarrhoea is to take 1 tablespoon of unsweetened carob powder and stir it into a cup of water. This can be taken hourly as needed.

**Irritable Bowel Syndrome**

This is the most common gastro-intestinal disorder reported to general practitioners and up to 50% of referrals to gastro-intestinal specialists are for this complaint. It presents as recurrent abdominal pain and distention with diarrhoea and/or constipation, in the absence of any demonstrable organic pathology. It is more common in women, especially between ages 20-40 years. There is commonly a multi-factorial etiology including psychogenic factors (stress), food intolerance, antibiotic therapy, or food poisoning. Lactose intolerance is common among people with IBS.

Symptoms include
- Pain in the right and/or left iliac fossae and/or in the hypogastrium.
- Pain may be ‘flitting’ and is typically increased with food and reduced by defecation
- Bowel habits are variable and frequently alternating: diarrhoea especially in the morning, pellet-like (‘rabbit dropping’) stools, constipation
- Bloating/distention
- Excessive flatus
- Loud bowel sounds
- Nausea
- Weight loss
- Headache
- Lack of energy
Conditions which may mimic IBS include:

- Inflammatory bowel diseases such as Ulcerative colitis or Crohn’s disease.
- Laxative abuse.
- Diverticular disease.
- Metabolic disorders such as diabetes mellitus, hyper or hypothyroidism and adrenal insufficiency.
- Disturbance of bowel flora from antibiotic or antacid use.
- Intestinal candidiasis.
- Infectious enteritis (e.g. amoebiasis or giardiasis).
- Lactose intolerance.

**Holistic treatment of irritable bowel syndrome**

The diet should consist of small regular meals with no binging or fasting. A high fibre diet will be helpful to increase stool bulk and act as a stool softener. As wheat is so often implicated in food allergies, it is probably best to avoid adding wheat bran to the diet but to increase fibre by the use of fruits, vegetables, legumes, oat bran and psyllium.

Because food intolerances are so often implicated in the aetiology of IBS it is important to determine what these may be and avoid aggravating foods. Conventional blood tests of suspected allergens will be unlikely to give positive results because many food allergies are mediated by IgG and not IgE which is what most of the blood tests measure. Also some food intolerances are not mediated by the immune system at all. Thus the best way of testing for IBS food intolerances is by elimination diets and systematic reintroduction of foods. See related article Constitutional Food Intolerance by Paul Bergner in Volume 11, Number 1 Spring 1999 issue.

Many people diagnosed with IBS will find that their symptoms clear up when they undergo a treatment for systemic candidiasis and it is often useful to follow the anti-candida program.
Psychogenic factors are very significant in the causation and the aggravation of IBS and it may be useful for the sufferer to undergo a course of counseling, hypnotherapy or psychotherapy in order to learn to deal with these factors. Relaxing nervines will also be of benefit.

**Herbal remedies**

- Carminatives
- Intestinal tonics
- Anodynes/analgesics as required.
- Tonic nervines and relaxants

If the psychogenic factors are very predominant then the person may be helped by *Valeriana off.* (Valerian) and other relaxing nervines and hypnotics

*Chamomilla recutita* (Chamomile), *Melissa officinalis* (Lemon balm) and *Humulus lupulus* (Hops) are particularly useful herbs in IBS because they have relaxing and calming effect on both the digestive system and the nervous system.

Bulk laxative herbs (*Psyllium, Ulmus fulva*) may be taken for both diarrhea and constipation, softening and bulking a small hard stool and absorbing water and giving form to a very loose stool. In cases of constipation more water should be taken with the fibre.

**Sample formula for irritable bowel syndrome**

Where constipation is the predominant bowel pattern

*Chamomilla recutita* (Chamomile) carminative, relaxing nerve, bitter, anti-inflammatory
1 part

*Melissa officinalis* (Lemon balm) relaxing nerve, carminative, anti-spasmodic
1 part

*Rumex crispus* (Yellow dock) mildly laxative for occasional use
1 part

*Viburnum opulus* (Cramp bark) muscle relaxant, anti-spasmodic
1 part

*Althea officinalis* (Marshmallow) soothing demulcent, anti-inflammatory
1 part

Where diarrhoea and looseness are the predominant bowel pattern

*Chamomilla recutita* (Chamomile) carminative, relaxing nerve, bitter, anti-inflammatory
1 part

*Humulus lupulus* (Hops) astringent, bitter, carminative, relaxing nerve
1 part

*Potentilla tormentilla* (Tormentil) gentle astringent
1 part

*Menta piperita* (peppermint) carminative, tonic nerve
1 part

*Hydrastis canadensis* (Goldenseal) astringent, bitter, mucosal tonic
1 part

*Cinnamomum zeylanica* (Cinnamon) warming, astringent, circulatory tonic
1 part

See related Case study on page ten.

**Diverticular Disease**

Diverticulae are pouches or small herniations of the colonic mucosa through the muscular gut wall. They may occur anywhere in the colon but are most frequent in the sigmoid colon. The size varies from 3mm. to over 3cm. in diameter. They are present in up to 40% of persons over the age of 50 years and the incidence rises with increasing age. Their presence is labeled diverticulosis. If they become inflamed or infected then the resulting condition is referred to as diverticulitis.

A diet which is highly refined, high in meats and consistently low in fibre causes the colon to contract harder to move matter along. Eventually this increased intra-luminal pressure may cause herniation of the mucosa through weak spots in the colon wall (usually where colonic blood vessels pierce the muscle to supply the underlying mucosa). The diverticulae are easily filled with feces, and because they are only mucosal and have no musculature they cannot contract to expel it. Thus a local inflammation occurs which may progress to actual infection. This process may be single or multiple, and may spontaneously resolve or may cause frank diverticular disease. As the intraluminal pressure builds up in the colon, the thin-walled diverticulae can
rupture and this will permit leakage of bowel contents and bacteria into the pelvic cavity with consequent peritonitis. The inflamed bowel segment often adheres to other pelvic organs (e.g. uterus or ovaries) and a fistula may develop from bowel to another hollow organ. With repeated inflammations the colon wall thickens and the lumen narrows. This may lead to bowel obstruction. Occasionally rupture of the diverticula may also rupture a branch of the colonic artery and this can lead to acute bowel hemorrhage.

Simple diverticulae are frequently asymptomatic, the signs and symptoms occurring usually once the sacs become infected or inflamed. Possible symptoms and signs include:

- Varying degrees of left iliac fossa pain of a colicky nature.
- Constipation with bouts of (sometimes bloody) diarrhea.
- Rectal bleeding.
- Loss of appetite.
- Flatulence.

Pain and tenderness may also be present in other parts of the colon, depending on where the diverticulae occur. A tender mass may be palpable in the colon, most commonly in the left iliac fossa. There may also be hard, tender, multiple, small masses that do not move on palpation. Pain aggravated by urination indicates adhesions of the bowel onto the bladder. Pain that is worst before or during the menses indicates adhesions of the bowel onto the uterus. Irregular menses suggests the possibility of adhesions of the bowel onto the ovaries.

**Holistic treatment of diverticular disease**

Regular exercise is important to ensure that there is adequate blood flow in the pelvic cavity which will help inflammation and relieve pelvic congestion. Yoga, walking, cycling, swimming, dancing and running are all effective.

Constipation should be addressed with the use of softening bulk laxatives. Never use harsh irritating laxatives such as Senna or Cascara. If something stronger than Psyllium is required use Yellow dock and Dandelion root. Water should be taken at a rate of one 8 oz glass per 20 pounds weight. A high fibre diet will also help.

The maintenance diet should emphasize fruits and vegetables and meat and dairy products should be minimized. All seeds and nuts should be ground or soaked and all grains should be well cooked to avoid irritating the colon mucosa and to prevent them from getting stuck in the diverticulae. Sugar, fried foods, coffee, black tea and spices should be avoided. Flax seeds are useful to provide both fibre and essential fatty acids. The seeds should be freshly ground just before using, 2 - 4 tablespoons per day in cooked cereals, soups, salads etc.

The same supplement regime as described in the section on chronic inflammatory bowel disease (See Volume 11, Number 1, Spring 1999) may be usefully employed in diverticular disease.

**Herbal remedies**

- Anti-spasmodics
- Anti-inflammatories
- Soft bulk laxative
- Alteratives & blood cleansers
- Pelvic decongestants

Other useful treatments include clay or castor oil packs over the abdomen to improve local circulation, alleviate inflammation and remove congestion. Colonic irrigation with chlorophyll implants are very beneficial in breaking down the impacted feces and removing it from the system. High doses of garlic and probiotics are useful in helping to regulate the bowel flora. Warm sitz baths with *Chamomilla recutita* (Chamomile) and *Lavandula spp.* (Lavender) may be beneficial in relaxing the colonic musculature and reducing inflammation.

**Sample formula for diverticular disease**

*Calendula off.* (Marigold) anti-inflammatory, immune stimulant, bitter alterative, lymphatic stimulant, vulnerary 2 parts

*Glycyrrhiza glabra* (Licorice) anti-inflammatory, immune supporting, adaptogenic 1 part

*Dioscorea villosa* (Wild yam) anti-inflammatory 1 part

*Althea off.* (Marshmallow) soothing demulcent 1 part

*Chamomilla recutita* (Chamomile) bitter, anti-inflammatory, anti-allergenic, relaxing nervine 1 part
Case Study

Hemorrhoids and Irritable bowel syndrome; prevention of scheduled surgery

Chanchal Cabrera, M.N.I.M.H.

Female, 67 years old. Presented with 6 years of chronic, episodic bowel disturbance (looseness and urgency with severe bowel pain). This had caused hemorrhoids and anal fissures, for which she was awaiting surgery. She actually presented to the office wanting pre-surgical support, and scheduled for surgery in three weeks. The onset of the problem was concurrent with severe stress (divorce, death of mother and new job combined). She experienced lots of gas and bloating and crampy pain. There was no blood or mucus in the stool but occasionally some undigested food. Her diet included red meat twice a week, fish, chicken plenty of fruit and vegetables, lots of carbonated water and a lot of refined carbohydrates and sugars (cakes, cookies, sweets). She drank no coffee. The only medication she used was a cortisone suppository.

Recommendations

She was asked to remove the red meat from her diet, to reduce the chicken to once a week and eat more fish and vegetable proteins (tofu, beans, nuts, seeds), avoid all refined grains or cereals and all sweetened foods, and as much as possible to eat raw or very lightly cooked.

Vitamin C to bowel tolerance
Flax oil 2 tbsp. / day

Herbal Formula

Tilia europea (1:3) (Linden) 15 ml
Carduus marianus (1:3) (Milk thistle) 15 ml
Dioscorea villosa (1:4) (Wild yam) 15 ml
Achillea millefolium (1:3) (Yarrow) 15 ml
Collinsonia canadensis (1:4) (Stone root) 10 ml
Aesculus hippocastanum (1:3) (Horse chestnut) 10 ml
Geum urbanum (1:3) (Avens) 10 ml
Althea officinalis (1:3) (root) (Marshmallow) 10 ml


Althea officinalis (Marshmallow), Achillea millefolium (Yarrow) and Agrimonia eupatoria (Agrimony) were also given to make a sitz bath.

Outcome

Three weeks later she returned to tell me that she felt almost 100% better. Within a week of changing her diet and starting the herbs she had no more urgency or looseness, no pain, virtually no discomfort from the hemorrhoids. Her doctor had canceled the surgery and she had reduced the use of the suppositories significantly.

She agreed to continue with the herbal program unchanged for another 2 months before slowly reducing the dose to 5 mL twice a day for a month then once a
day for a month. I also prescribed GastroFort tea: Chamomilla recutita (Chamomile), Carica papaya (Papaya leaf), Foeniculum vulgare (Fennel), Glycyrrhiza glabra (Licorice), Filipendula ulmaris (Meadowsweet), Cinnamon and Ginger.

I saw her several times over the next few months and she just continued to get better and better. Eventually she was off all medications, both prescription and herbal except the digestive tonic tea and occasional use of the cream as needed. She maintained a very good diet, and learned that wheat was a definite trigger for attacks of diarrhoea. Her bowel movements were completely normal and she had no more pain.

**Garlic and Helicobacter pylori revisited**

by Paul Bergner

We reported in Volume 10, Number 1-2 on research indicating that garlic preparations may effectively treat *Helicobacter pylori* infection, which often accompanies peptic ulcers and gastritis (Bergner). A recent trial has found one garlic preparation ineffective for this (Ernst), but don’t throw away your bulbs yet.

In the trial, twenty individuals who tested positive for *H. pylori* using a breath test received 300 mg tablets of dried garlic powder (a product from Lichtwer Pharma in Germany) three times a day for eight weeks. After an eight week follow up, only one of the patients was free from the infection, as demonstrated by the breath test. The researchers then did single case follow ups comparing the crushed tablets with fresh garlic. They do not report the result of this, or details of the duration of the treatment, the method of preparation, and so on, reporting only that a whole bulb of garlic caused acute nausea and vomiting in a patient.

It's not surprising that garlic powder tablets had little or no effect on the infection. The potent antimicrobial substance in garlic is allicin, which has a half life of about 18 hours. Allicin degrades into other sulfur-containing constituents, many of which have medicinal effects, but none with the equivalent topical antibiotic effect of allicin. It is released after crushing fresh garlic, and is for practical purposes gone within 3-5 days. Commercial garlic power products are made with minimal cutting of the bulb in order to preserve the allicin content. Although in-vitro research shows that many powdered garlic products retain their aliin content (the precursor to allicin), invivo comparisons of powders and fresh garlic are lacking. Actual clinical reports indicate that freshly or recently crushed cloves are much more effective for antibiotic purposes. Dr. Subhuti Dharmananda of the Institute for Traditional Medicine in Portland, Oregon uses garlic to help control intestinal infections in AIDS patients. He reports that powdered products were ineffective for this purpose, even in doses of 27 tablets per day, but that of freshly blended garlic in doses of three cloves 1-3 times a day effectively treated some opportunistic intestinal infections of AIDS. What he reports for these infections may be true of *H. pylori* as well. In-vitro-research indicates that concentrations of allicin such as would be found in 2-6 cloves of garlic blended in a quart of water are effective against *H. pylori* (Sivam et al), a dose is in the same range that Dharmananda reports effective clinically.

Another weakness of the Ernst trial is the method used for testing *H. pylori*. The breath test detects infection but cannot quantify it. The infections could have been reduced in all the patients without this fact being detected by the test.


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Cook (from page one)

neo-Thomsonianism, independent Thomsonianism, and Botanico-medicalism. The chief difference between Thomsonianism and Physio-medicalism was the medical education advocated by the latter, and a greatly expanded materia medica. Physiomedicalism was always the smallest of the medical sects during the 1800s, never accounting for more than 2-3% of the practicing physicians. It was almost completely eliminated by the early twentieth century in North America by the combined opposition of the Eclectics, Homeopaths, and Regular physicians, who formed an alliance to demand licensing laws (but denying licenses to the Physio-medicalists). Physiomedicalism jumped the Atlantic, however, and strongly influenced the development of British medical herbalism.

After Alva Curtis, William Cook was the most prominent of the Physio-medicalists, especially as the author of The Physio-Medical Dispensatory (1869). The book served as the primary materia medica and pharmacy text for the sect until the demise of the last Physio-medicalist school in 1915. During the period from about 1840-1860, all the medical sects, including the Physio-medicalists were exploring methods to extract active constituents from plants. This may seem surprising today, with contemporary herbalists generally opposed to standardized extracts of plants or to drugs. This movement in plant pharmacy was driven by the emerging pharmaceutical industry, which arose to meet the demands of physicians for medicines that were easier to dispense and powerful in their action. Eclectic medical physicians during the 1850s and 1860s tended to use these potent plant extracts in the same manner that their Regular physician counterparts used powerful heroic mineral medicines. With this type of practice, Eclectic medicine almost died out, reaching its lowest ebb in 1861. By 1870, John Scudder helped revive Eclecticism with the publication of his Specific Medication, which related the specific actions and physiological indications of a wide number of plants. Much of the material, including the extensive materia medica, was derived from Physio-medicalist and other herbal practice rather than prior Eclectic works, and the publication of Cook’s Dispensatory the year before, in the same town that Scudder practiced, undoubtedly influenced the work. The Eclectic movement toward specific medication advocated the use of single remedies for specific physiological indications. John Uri Lloyd eventually developed the pharmacy side of specific medication by devising sophisticated extraction methods to concentrate certain constituents in alcohol tinctures while excluding others. His commercial Specific Medicines, the main medicines dispensed by the Eclectics after the 1890s, were thus hybrids between traditional tinctures and the concentrated constituent extracts of the 1850s.

Cook’s Dispensatory, with its extensive sections on the pharmacy of some plants, thus provides a historical snapshot of plant pharmacy in transition. He describes traditional forms such as infusions, decoctions, and simple tinctures (all of which he prefers over the more concentrated forms). He also describes how to make solid extracts, ether extracts, resinoids, alkaloid constituent extracts, and many more forms which had been popular in previous decades. He critically compares the different forms, saying which will extract the medicinal properties of the plant better than others.

The Dispensatory also makes a strong and clear stand for vitalism as posed to the allopathic methods used by the Regulars and many of the Eclectics of the time. It remains perhaps the most eloquent herbal text in print in Western herbalism for the clarity of its advocacy of vitalist herbalism:

Probably in no field of investigation is there so much proneness to loose observation, and exaggerated statements as in that of medicine. The study is made complex by the fact of two forces there always operating in connection – the direct force of the agents, and the responsive actions of the life power. And the many organs used by the life power, and the diverse manners in which it may act through each one of these organs, greatly increase the intricacy of such a study. The physician is in continuous temptation either to attribute all action to the agent, and thus throw out the important part enacted by the life power; or else, noticing the
wonderful influences and works of this power, to connect all the results with it, and allow nothing whatever to the agents. Either method is an error; and is of such common occurrence that large classes of physicians are in the habit of adopting one or the other.

**Vinegar Extracts**

Cook discusses vinegar extracts in general, and specifically gives methods for vinegar extractions of several herbs. He describes the properties of vinegar itself, and generally limits his vinegar preparations to herbs with similar actions to the vinegar medium.

- Promotes the secretions of the kidneys
- Promotes the secretions of the throat and respiratory tract membranes
- Mixed with sweetened water makes a pleasant drink in febrile and inflammatory cases.
- Promotes perspiration when drunk warm in large quantities, in a patient well covered in bed.
- Daily use for scurvy and for looseness of the bowels and feverishness that arise from scorbutic conditions.
- Vapor may be inhaled for sore throat
- Fomentations for sprains, bruises, and pains in the bowels.

Cook states that the action of vinegar tinctures are mostly restricted to the respiratory passages and stomach. Here is his description of the production and use of vinegar infusion of capsicum:

Mix vinegar, 2 ounces; capsicum 10 grains, and common salt, two drachms. Stimulating and antiseptic gargle for sore throat. Take every hour or two. A flannel around the neck may be kept moistened with the same. Arrests vomiting in cholera.

Other gargles in vinegar infusion that Cook describes are made with.myrica, xanthoxylum, cornus, hydrastis, and sanguinaria.

**Lobelia vinegar preparations**

Cook describes three different kinds of vinegar preparations of lobelia, two vinegar tinctures and one mixed maceration with vinegar and alcohol.

**Acetous tincture.** Lobelia seeds, well ground, 2 ounces. Distilled vinegar (or twenty percent acetic acid) one pint; macerate for a week, express the liquid, filter, and add an ounce of distilled alcohol. Dose: 5-10 drops in any demulcent tea. Mean use: bronchial afflications.

**Honey of lobelia.** Tincture bruised green lobelia herb in enough good cider vinegar to cover it thoroughly. Express after a week. Mix with honey at a rate of three pounds honey to a quart of the tincture. Evaporate on a water bath to the consistency of thin molasses. Dose 10-30 drops. Main use: dry and irritable coughs.

**Fluid Extract.** Crush one pound of lobelia herb well, and macerate it for twenty-four hours with a pint and a half of diluted alcohol and one fluid ounce of acetic acid (or vinegar). Transfer to a percolator, add another pint and a half of diluted alcohol, and then continue the process until three pints of tincture have passed. Evaporate on a water bath (low temperature) until 10 fluid ounces remain; to this add six ounces of 90 percent alcohol, to dissolve any extractive matter, and then filter through filter paper. Main use: expectorant

Notice that the different preparations have slightly different clinical applications.
Clinical Trials

Hypericum, drug interactions, and liver effects

by Paul Bergner

Two articles published in the February 14 issue of The Lancet have identified potentially serious interactions between concentrated extracts of St Johnswort (Hypericum perforatum) and several drugs used in AIDS and organ transplant patients. Hypericum apparently increases the activity of the liver enzymes that metabolize and inactivate the drugs, lowering effective blood levels. In the case of the AIDS drug indinavir, hypericum standardized extracts at a dose of 300 mg three times a day lowered blood levels by 57-82%, rendering it therapeutically ineffective. In two patient with heart transplants, hypericum extracts in the same dose reduced circulating cyclosporin to the point that both patients began to reject the transplanted heart. Hypericum had reduced circulating cyclosporin levels to approximately 50-70% of their pre-hypericum levels within two weeks.

The specific enzyme system whose activity was increased in the test subjects is the CYP3A, part of the p450 microsomal enzyme system, responsible for Phase I detoxification in the liver and also present in intestinal and kidney cells. The CYP3A subfamily is the most abundant group of p450 enzymes in the liver. Many drugs are mainly metabolized by the CYP3A enzymes, as are many fat soluble hormones, including estrogens and cortisol. Thus hypericum could have similar actions to those reported with many drugs. Depending on whether the drugs are metabolized to their active form or inactive forms by the enzymes, simultaneous consumption of hypericum extracts may either increase or decrease blood levels. Consequences could range from innocuous to fatal depending on the nature of the drug and how critical the drug dose is to the patient’s health. For the two drugs reported in Lancet present a strong hazard for patient injury because of the critical nature of the drugs, the widespread promotion of concentrated extracts of hypericum for depression, and because depression frequently accompanies AIDS and organ transplantation. The reports should prompt modern herbalist to use caution in prescribing hypericum for depression in patient receiving simultaneous pharmaceutical drug prescriptions.

Continued on back page
Lomatium rash.

We discussed a possible distinctive rash as a side effect to the use of Lomatium dissectum in our Volume 10, Number 4, Fall 1998 issue. The following anecdote, with photo available online, comes from Henriette Kress or Finland.

“We had that ‘lung grunge’ going around, at the end of January 1998, at the Southwest School of Botanical Medicine, so Michael Moore mixed me a one-ounce bottle of diverse things, among them perhaps 5-10 ml of Lomatium tincture (this was either a 1:2 95 % fresh or a 1:5 70 % dried). I took perhaps five droppers of that a day for about three days, and then I woke up with the rash - at about the same time as the infection broke. Jonathan Treasure was at school that day, so I showed it to him - he was concerned that I perhaps had scarlet fever. When Michael showed up a few hours later he was crowing - “Folks, we have a Lomatium rash!” Michael uses Lomatium for viral infections, and he says that the rash is a sign of massive die-off; if you don’t have a systemic infection you won’t get the rash, and not everybody gets it even with an infection.

Perhaps it could be avoided by adding some liver and some hot herbs to the mix, to speed cleanup?

You can view a picture of my arm, at the time when I had a full-blown, itchy, full-body Lomatium rash, at http://metalab.unc.edu/herbmed/pictures/misc/_lomatium.jpg

Henriette Kress
Finland

Lobelia

Thanks you for your issue on Lobelia -- well done!

I’ve used lobelia successfully in small to medium doses to reduce swelling on bruises over bones, headwounds, and to help prevent miscarriage once contractions have started -- both with great success.

Sasha Daucus
Doniphan, MO

This new incarnation of Dr. Moerman’s ethnobotany database, following two previous smaller publications and a web-based database, is a must-own book for the student of Native American uses of plants for medicine or food. Most texts on Native American ethnobotany cover plants used in a particular region or by a specific tribe. This 927-page hardbound edition covers all of North America. This is a secondary reference, a compilation of the primary observations from more than 200 ethnobotany texts. More than 4000 plant varieties are included, and are indexed by botanical name, botanical synonym, usage, and native American tribe. The strength of the book — its comprehensive scope — naturally leads to its weakness: a poverty of detail about the plants and uses. Cataloguing and encapsulating medicinal uses of plants to fit the information into a database inevitably leads to generalizations and loss of data that the reader interested in a specific plant or tribe might consider indispensable. The listings in Ethnobotany are brief. Although the essential information about plant part, use, and method of preparation are included, information on dose, or clarification of terms is often missing. The brief listings may be a disappointment to the medical herbalist looking for practical clinical information, but the book is a good investment for the reader who does not want to buy an entire library of ethnobotany books.


Like Moerman’s Native American Ethnobotany, this is a secondary compilation of primary ethnobotany references. Thie provides much more detail about the plants and uses, the information expanding to the detail required for the medical herbalist. Her focus on the species and varieties particular to the Pacific Northwest make this text indispensable to the student interested in the plants of that region. Moerman’s listing on the Bella Coola use of Devil’s Club for rheumatism states: “Decoction of root bark and stems taken for rheumatism,” an adequate listing for an overview. I suspect the medical herbalist would prefer Thie’s “One cupful, three times a day for one or two weeks was drunk “to cure’ rheumatism.” The herbalist would also like to know that the decoction was taken in one or two cup doses before and after childbirth for a purgative, which Moerman does not relate. Moerman’s description that the plant was “considered poisonous” by the Cowlitz is misleading compared to Thie’s detail: “The Cowlitz shared how the spines are poisonous and cause inflammation.” The book has 209 pages, laminated and wirebound, and can be ordered with an accompanying disk version in word processor format.


Kelly Kindscher is a long-time bioregional and ecological activist from the Prairie region in the Midwest United States. At one point, he engaged in an eighty-day walk from Kansas to the Rocky Mountains to see the region first hand. Kindscher eventually earned his PhD in plant ecology from University of Kansas. That sort of commitment has led to what are unquestionably the two most useful contemporary books on plants of the Prairie. Medicinal Wild Plants and Edible Wild Plants have some overlapping material, with some food uses listed for plants in the first, and some medicinal uses in the second. Although either is a useful stand-alone reference, the two as a set contain exhaustive information on the uses for plant species from this region. Edible Wild Plants contains information on nomenclature, parts used, food use and cultivation for more than 90 plants with line drawings for about half of them. Medicinal Wild Plants contains information on nomenclature, habitat, Indian use, Anglo folk use, use in medical history, some entries for recent scientific research, and cultivation. Kindscher frequently cites Eclectic medical use for the plants. These books are authoritative. Kindscher has thoroughly studied the ethnobotany of each and presented the most useful information. What is most striking to me about these books are Kindscher’s frequent comments revealing that he has personally seen, tested, and sometimes tested the methods he writes about, something rare in the ethnobotanical literature of North America.
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Hypericum (from page sixteen)

The reports may also explain some traditional uses of hypericum. Older texts in European herbalism describe hypericum as a liver herb. Sebastian Kneipp; My Water Cure, for instance, states: “This medicinal herb has a particular influence on the liver; its tea is an excellent remedy for it.” Andrew Chevallier’s contemporary Encyclopedia of Medicinal Plants states that hypericum is a cholagogue and tonic for the liver and gallbladder. The liver effects of hypericum are hardly taught today, with the herbs antidepressant effects taking the spotlight after clinical trials and intensive marketing of the herb for that reason. Liver effect and antidepressant effects may in fact be related. In traditional Greek/Arabic medicine, as well as in traditional Chinese medicine, some forms of depression are considered as arising from impaired function of the liver, and the same CPY3A system that hypericum stimulates is responsible for clearing cortisol from the system. Elevated cortisol, the adrenal stress hormone, is associated with depression.

The CPY3A system is also responsible for clearing estrogen from the system, and the recent findings may explain the traditional use of hypericum for female complaints associated with hyperestrogenism. Finley Ellingwood, MD classified hypericum as a “sedative especially useful in the diseases of women” in the 1919 version of his materia medica. More recently, Malcolm Stuart said of hypericum in his Encyclopedia of Herbs and Herbalism that “Certainly when taken internally, the herb stimulates both gastric and bile secretions, and is effective for irregular menstruation.”

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