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A Phytotherapeutic Approach to Lower Bowel Disease

The lower bowel, large intestine or colon, measuring about 6 ½ feet in an adult, is specially adapted for absorption of fluids from the stool and the forward movement of food wastes. The mucosal lining both absorbs fluids and some food particles, but also secretes lubricating mucus and is a mechanism for the excretion of substances from the blood stream into the gut.

The digestive function of the colon is carried out largely by bacteria. There may be over 3 lbs. of bacteria in a healthy colon and these ferment any remaining carbohydrates, producing lactic acid, hydrogen, carbon dioxide and methane. The bacteria also convert any remaining amino acids into simpler substances: indole, skatole, hydrogen sulfide and fatty acids. The indole and skatole are carried off in the feces and give them their characteristic odor, and the rest are absorbed into the blood stream for transport to the liver. The bacteria also decompose bilirubin breakdown products into stercobilin which gives the feces their color and they produce vitamins K and B12. Healthy bowel flora is critical and can be promoted with the use of Psyllium, Garlic and probiotics. Fructo-oligosaccahrides (complex fruit sugars) are the preferred food of many beneficial bacteria and a daily teaspoon of Slippery Elm powder stirred into water can be very helpful.

There are many different strains of bacteria naturally present in the colon and when supplementing them it is important to take a broad spectrum product. Ideally the supplement should include some or all of the following strains: Lactobacillus acidophilus, L. rhamnosus, L. casei, L. bulgaricus, Streptococcus thermophilus, Bifidobacterium bifidum, B. longum and Enterococcus faecium.

Bowel disease comes for many reasons and in many forms. Generally full blown disease is preceded by years of dietary abuses and poor lifestyle habits with low grade symptoms of digestive disturbance including episodes of constipation or diarrhoea, flatulence, belching, bloating and cramping. Attention to the fundamental dietary and lifestyle issues forms the foundation of the treatment plan.

Diseases of the colon may be inflammatory (Crohn's Disease, ulcerative colitis, diverticulitis) or may be functional (constipation, diarrhoea, diverticulosis). Inflammation of the colon commonly leads to leaky gut syndrome triggering food allergies which may in turn aggravate the inflammation.

HERBAL ACTIONS FOR BOWEL DISORDERS

"i'd rather wake up in the middle of nowhere than in any city on earth

steve mcqueen

(1930 to 1980)

Alteratives

These are herbs that balance metabolic processes and aid the eliminative functions. They usually act via the bitter taste and a vagal reflex to stimulate the liver and gall bladder. In this way they aid in the removal of metabolic wastes and are the classic 'blood purifiers' of older herbal books. For bowel disease they are useful when there is sluggish digestion with constipation. This may manifest as blemished skin, bad breath, nausea, acid reflux, bloating, cramping and griping, flatulence, belching or a sensation of fullness and discomfort in the upper right quadrant. The alteratives should not be used when there is diarrhoea.

Arctium lappa (Burdock)
Rumex crispus (Yellow Dock)
Iris versicolor (Blue Flag)
Chionanthus virginicus (Fringe Tree)
Taraxacum off. radix (Dandelion)
Berberis vulgaris (Barberry)
Trifolium pratense (Red clover)

Anti-inflammatories

These are herbs which reduce the inflammatory processes by a variety of mechanisms. The may soothe the irritated mucus membranes by coating them with mucilage, regulate the fatty acid - prostaglandin cascade, improve circulation to the affected area and regulate the functions of cortisol and the actions of the immune system.

Chamomilla recutita (Chamomile)
Calendula officinalis (Marigold)
Salix alba/nigra (Black/White Willow)
Filipendula ulmaris (Meadowsweet)
Dioscorea villosa (Wild Yam)
Glycyrrhiza glabra (Licorice)
Harpagophytum procumbens (Devil's Claw)
Althea officinalis (Marshmallow)
Ulmus fulvus (Slippery elm)
Curcuma longa (Turmeric)

Anti-spasmodics

These are herbs which relax the musculature, promote regular and smooth peristalsis and relieve cramping and griping. This may be achieved through improved circulation to the pelvic region, by direct neural influence or by indirect reduction of overall stress in the system.

Viburnum opulus (Cramp bark)
Chamomilla recutita (Chamomile)
Zingiber officinalis (Ginger)
Valeriana officinalis (Valerian)
Mentha piperita (Peppermint)
Humulus lupulus (Hops)
Melissa officinalis (Lemon balm)
Lobelia inflata (Lobelia)

Carminatives

Herbs with high volatile oil content that relaxes the gastro-intestinal tract and reduces flatulence, belching and griping. Often prescribed along with bitter alteratives and with laxatives. Suitable for use as tea after eating and seeds may be chewed.

Pimpinella anisum (Anise)
Foeniculum officinalis (Fennel)
Mentha piperita (Peppermint)
Melissa officinalis (Lemon balm)
Chamomilla recutita (Chamomile)
Carum carvi (Caraway)
Rosmarinus officinalis (Rosemary)
Zingiber officinalis (Ginger)
Cinnamonum spp. (Cinnamon)

Astringents

Herbs that tone and tighten the lining of the gut and prevent bleeding or fluid loss. They all contain tannins which are antibacterial, anti-viral and anti-inflammatory. Astringents with a tissue specificity for the bowel include

Agrimonia eupatoria (Agrimony)
Quercus alba / rubra (White / Red Oak)
Geranium maculatum (Cranesbill)
Geranium robertianum (Herb robert)
Potentilla spp. (Tormentil)
Capsella bursa-pastoris (Shepherd's Purse)
Rubus ideaus (Red raspberry)
Geum urbanum (Avens)

Demulcents

These are herbs especially rich in mucilage that can soothe and protect irritated or inflamed tissues. They are a type of anti-inflammatory and are somewhat vulnerary (healing) as well.

Symphytum off. (Comfrey)
Althea off. (Marshmallow)
Ulmus fulvus (Slippery Elm)

Mucosal tonics and regeneratives

These are herbs which nourish and strengthen the mucosal lining and improve its integrity. They combine very well with the use of N-acetyl-glucosamine which improves the quality and regulates the quantity of mucus being produced.

Gotu kola (Centella asiatica)
Plantain (Plantago lanceolata / major)
Goldenseal (Hydrastis canadensis)

Pelvic decongestants

These are herbs which improve circulation of blood and removal of lymph from the pelvic basin. They aid in the reduction of congestion and stagnation especially where there is chronic constipation or chronic inflammation.

Ginger (Zingiber officinalis)

Collinsonia canadensis (Stoneroot)
Achillea millefolium (Yarrow)

CHRONIC INFLAMMATORY BOWEL DISEASE

In chronic inflammatory bowel disease there is a strong correlation with genetic markers in the blood and with auto-immune inflammatory disease elsewhere in the body. There are greatly increased levels of prostaglandins in the serum, stools and enteric mucosa. In particular there is an increase in the levels of leukotrines that are formed from arachidonic acid and which promote inflammation. The bowel flora is usually very disturbed. This will impair nutrient absorption and promote diarrhoea, fermentation and flatulence. In active ulcerative colitis there is a significant decrease in the amount of mucus produced in the colon as well as a reduction of the sulphur content of the mucus. Thus there is a deficiency of soothing, anti-inflammatory mucus and of antibacterial, vulnerary sulphur.

Crohn's Disease

This is also called regional enteritis and refers to a chronic patchy inflammation of the digestive tract from anywhere oesophagus to anus, but most usually affecting the terminal ileum. Most cases of Crohn's disease occur between the ages of 20 and 40 years. It occurs about equally in men and women. Crohn's disease occurs mostly in white persons of Northern European and Anglo Saxon ethnic derivation. Caucasians are 5 times more likely to develop Crohn's disease than are blacks or orientals.

In the early stages of Crohn's disease there are tiny "aphthoid" ulcers of the mucosa with underlying nodules of lymphoid tissue. The inflammation progresses to involve all layers of the intestinal wall, especially the submucosal area. There is widespread lymphatic congestion around the gut and eventually the intestinal wall will become fibrotic. In advanced cases the transmural inflammation, deep ulceration, local oedema and fibrosis may cause bowel obstruction. There are often sinuses and fistulas, the latter of which may lead to many complications as infected material spreads to other hollow organs or to the peritoneal cavity.

The primary presenting symptoms are chronic diarrhoea (rarely with blood in the stool), flatulence, low grade fever, loss of appetite and weight, malaise and a feeling of fullness or sometimes crampy pain in the left iliac fossa. The symptoms frequently remit and recur over many months or years, but each relapse tends to be longer and more severe than the preceding one. Occasionally the patient will present with an acute onset of disease manifesting as intestinal obstruction, peritonitis or other forms of the 'acute abdomen'.

Ulcerative Colitis

This refers to an episodic inflammation of the mucosal lining of the colon or rectum. Like Crohn's disease, the commonest age of presentation is between 15 and 30 years although with ulcerative colitis there is another small peak in incidence between 50 and 70 years. The aetiology of ulcerative colitis is unclear but it may be associated with infection, allergy, auto-immune disorders and psychogenic factors. It often co-exists with Crohn's Disease and the aetiology may overlap.

The pathological presentation is of a continuous area of inflammation in the colon, causing the mucosa to be swollen and red. Ulceration may be deep or superficial, but is widespread, causing sloughing off of mucosa and exposure of unprotected cells. Inflammation usually begins in the rectosigmoid area and spreads upwards into the descending, transverse and ascending colon.

The presenting symptom is usually chronic diarrhoea with varying degrees of blood and mucus in the stool. There is commonly, also, some mild lower abdominal pain. Such attacks will come and go but, like Crohn's disease, each one tends to worse than the one before. If the ulceration is confined to only the rectum or sigmoid colon then the stools may be normal but there will also be rectal loss of mucus with or between bowel movements.

There may be occasional acute onset of ulcerative colitis. The person will present with sudden violent diarrhoea, high fever, signs of peritonitis and profound toxaemia. This is a medical emergency and the person should be taken to hospital immediately.

Comparison of Ulcerative Colitis and Crohn's Disease

	Ulcerative Colitis	Crohn's Disease
Age	usually 20-40	0-50 but more common 20-40
Bleeding	very common	unusual
Abdominal pain	rare	common
Abdominal tenderness	rare	occasional
Abdominal masses	no	occasional
Anal lesions	no	common
Rectal involvement	95%	50%
Small intestine involvement	no	usual

Possible complications of chronic inflammatory bowel disease include:

Chronic low grade fever
Malabsorption syndrome
Perianal skin tags an anal fistulae
Finger clubbing
Arthritis
Iritis and uveitis
Rashes
Aphthous Ulcers
Leucocytosis and raised ESR
Colon cancer
Erythema nodosum
Ankylosing spondylitis
Kidney stones
Dehydration
Malabsorption
Loss of appetite and weight loss
Local lymphadenopathy

Holistic treatment of chronic inflammatory bowel disease

Malnutrition is very common in inflammatory bowel disease. The severity will depend on the severity and duration of attacks. There are a number of possible reasons for this malnutrition which include:

- Loss of appetite and hence reduced intake of food.
- Diarrhoea allowing insufficient time for absorption.
- Decreased absorptive surfaces due to the disease process.
- Bacterial overgrowth and imbalance.
- Increased secretions in to the gut lumen leading to electrolyte and mineral loss in the stool.
- Increased intestinal cell turnover thus requiring more protein.

- Increased requirements of certain nutrients such as the essential fatty acids.
- Certain drugs such as corticosteroids and cholestyramine.
- Insufficiency of bile salts following surgical intervention.
- Malabsorption syndrome.

The nutritional approach to the treatment of inflammatory bowel disease is initially to use a modified cleansing program. Often symptoms of pain and abdominal discomfort are minimized by avoiding foods so, as long as the person is not too debilitated, then 2 or 3 days of mono food fasting would be ideal. Apples are excellent because the pectin content will soothe and protect the mucosal lining at the same time as acting as a gently bulking agent to give form and substance to the stool. Vegetable juices or brown rice are other useful fasting foods in this situation.

Garlic should be taken in high doses during the fast. At least 3 cloves per day and more if the person can tolerate them. Fresh raw garlic should be used. This will promote healing, reduce inflammation and balance the bowel flora. Slippery elm gruel can also be taken to soothe the inflamed tissues and promote healing.

Following the fast it is a good time to do allergy testing. The foods that are reintroduced into the diet will depend upon the individual tolerances. If it does not irritate the intestines then the person can go on to several days of raw foods then part raw and part cooked. If the digestive system is very sensitive then potassium broth is the best food to break the fast with, several bowls per day for 2 days before eating any solid foods.

Every 2 weeks the person should do a one day water fast to allow the mucus membranes to cleanse and regenerate. On the night before the fast and in the morning and evening of the fast the person should take 2 to 3 chopped cloves of garlic with 2 teaspoons of Slippery Elm powder in water.

It is important to emphasize the role of food allergies in the treatment of chronic inflammatory bowel disease. Lactose intolerance and frank allergy to milk protein is common and all dairy products should be strictly avoided for at least one month to assess the impact of this. Many patients achieve significant improvement from complete avoidance of all grains and cereals. This may be due to impaired digestive ability leading to passage of partially digested carbohydrate into the bowel where it causes disturbance in the bowel flora, or may be due to a more classical allergy. A book by Elaine Gottschall called ‘Breaking the Vicious Cycle’ can be helpful in guiding the patient through this process of grain and carbohydrate elimination.

Due to the impaired digestive ability and rapid transit time, many nutrients may be poorly absorbed and sub-clinical malnutrition is common. The fat soluble vitamins are particularly at risk of poor absorption. A comprehensive supplement program is helpful to ensure adequate supply of essential nutrients. For improved absorption it is ideal to take supplements in liquid form. If these are not readily available try crushing tablets and opening capsules. A basic protective program will include:

Zinc	30 - 50 mg daily
Folic acid	800 mcg daily
B 12	800 mcg daily
Beta carotene	20000 iu daily
Glutamine	up to 4 grams daily
Vitamin C	2 grams daily (buffered form)
Vitamin E	800 iu daily
Calcium citrate	500 mg daily
Magnesium citrate	500 mg daily
Evening Primrose oil	3 grams daily
Digestive enzymes	1 - 2 capsules after each meal (broad spectrum)
Gamma oryzanol	500 mg daily
N-acetyl-glucosamine	1500 mg daily

Herbal remedies

Mucilaginous herbs
Astringent herbs
Anti-inflammatory herbs
Mucosal tonics
Immune enhancers

When treating ulcerative colitis and Crohn's disease it is important to remember that they can be significantly affected by stress factors. Most patients will tell you that the symptoms are much worse when they are under stress so you should encourage the person to practice stress reduction techniques and possibly to take nervine herbs.

Psyllium may be used freely (1 - 2 teaspoon stirred into cold water once or twice a day on an empty stomach). This will give form and bulk to the stool. The high fibre content may bind some minerals and make them unavailable for absorption so it is best taken on an empty stomach.

Exercise is useful to reduce stress and maintain general levels of wellness. Exercise such as walking, cycling or dancing that encourages blood flow in the pelvis may be beneficial.

Sample formulas

For ulcerative colitis

Calendula off. (Marigold) *anti-inflammatory, immune stimulant, bitter alterative, lymphatic stimulant, vulnerary*	2 parts
Geum urbanum (Avens) *astringent*	1 part
Glycyrrhiza glabra (Licorice) *anti-inflammatory, immune supporting, adaptogenic*	1 part
Centella asiatica (Gotu kola) *mucosal tonic*	1 part
Dioscorea villosa (Wild yam) *anti-inflammatory*	1 part
Althea off. (Marshmallow) *soothing demulcent*	1 part
Hydrastis canadensis (Goldenseal) *mucus membrane tonic, bitter, antibacterial*	1 part

For Crohn's disease

Chamomilla recutita (Chamomile) *bitter, anti-inflammatory , anti-allergenic, relaxing nervine*	2 parts
Ceonothus (Red root) *lymphatic and tissue decongestant, immune support*	1 part

Achillea millefolium (Yarrow) *pelvic decongestant, astringent, bitter*	1 part
Glycyrrhiza glabra (Licorice) *anti-inflammatory, immune supporting, adaptogenic*	1 part
Centella asiatica (Gotu kola) *mucosal tonic*	1 part
Plantago lanceolata (Plantain) *mucosal tonic, astringent, vulnerary*	1 part

DIVERTICULAR DISEASE

Diverticulae are outpouchings 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. The presence of these outpouchings is called *diverticulosis* and 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 danger of 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) diarrhoea.
* 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 may be usefully employed in diverticlar 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
Viburnum opulus (Cramp bark) *muscle relaxant anti-spasmodic*	1 part

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 mufti-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.

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 off. (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, Slippery elm) may be taken for both diarrhoea 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 nervine, bitter, anti-inflammatory*	1 part
Melissa officinalis (Lemon balm *relaxing nervine, 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 off. (Marshmallow) *soothing demulcent, anti-inflammatory*	1part
Lobelia inflata (Lobelia) *muscle relaxant, anti-spasmodic*	½ part

Where diarrhoea and looseness are the predominant bowel pattern

Chamomilla recutita (Chamomile) *carminative, relaxing nervine, bitter, anti-inflammatory*	1 part
Humulus lupulus (Hops) *astringent, bitter, carminative, relaxing nervine*	1 part

Potentilla tormentilla (Tormentil) *gentle astringent*	1 part
Mentha piperita (peppermint) *bitter, carminative tonic, nervine*	1 part
Hydrastis canadensis (Goldenseal) *astringent, bitter, mucosal, tonic*	1 part
Cinnamonum zeylandica (Cinnamon) *warming astringent circulatory tonic*	1 part

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 (ie. attempts must be made to find out the underlying cause otherwise treatment will not be effective in the long term). 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 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 fibre, 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 & 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 anaesthetics, antacids, anticholinergics, anticonvulsants, antihypertensives antipsychotics, beta blockers, diuretics, iron, bismuth,

muscle relaxants, 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.

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 fibre holds water in the colon which makes the stools softer and bulkier. This stimulates the defecation reflex and makes the stools easier to pass. Fibre also tends to hold toxins in the stool and minimize their reabsorption as well as making the transit time faster. Fibre 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, rebounding, 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 - if you need to go then go! 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. E.g.. Plantago ovata (Psyllium), Linum usitassisimum (Flax)
* Contact stimulants irritate the colon wall and cause it to attempt to evacuate the offending substance. Mineral oil and castor oil are the commonest 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. E.g.. Rhamnus spp. (Cascara / Buckthorn) Cassia spp. (Senna) & 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 off. radix (Dandelion)
Arctium lappa (Burdock)
Rumex crispus (Yellow Dock)
Rheum off./palmatum (Turkey Rhubarb)

Laxatives
Gentle bulking type
Linum usitatissimum (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 (Pokeroot)

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 is the elderly.

In the hypotonic state stimulating laxatives and liver & 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 *aloin, aloe-emodin & 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 a 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.

DIARRHOEA

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 diarrhoea:

* Osmotic diarrhoea 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 saline laxatives such containing magnesium, phosphate or sulphate, general nutrient malabsorption and the use of certain antacids containing magnesium. In this type of diarrhoea 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 diarrhoea 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 entero-pathogenic viruses; unabsorbed dietary fats in liver or gall bladder disease; excessive use of anthraquinone cathartics or other irritating laxatives; certain hormonal imbalances such as secretin or calcitonin; or prostaglandin imbalances.

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

* Exudative diarrhoea 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 diarrhoea because there is insufficient time for fluid absorption to occur. The commonest causes of this are intestinal resection which reduces the surface area of the intestines and stress which speeds up peristalsis. Diarrhoea may also result from anti-biotic use causing the death of commensal bowel flora.

The holistic treatment of diarrhoea

Diarrhoea, 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 allergy involvement.

Most cases of diarrhoea 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 WHO gives 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 boiled 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 e.g.. vegetable soup, yoghurt, cooked fruits, grated apple. It will be useful to take probiotics acidophilus and garlic to re-colonate the bowel flora which 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.