# CROHN'S

**Symptoms:**

- intermittent bouts of diarrhea, low grade fever
- anorexia, weight loss, flatulence, malaise
- abdominal tenderness, esp. lower right quadrant, signs of peritoneal irritation, abdominal or pelvic mass
- x-rays show abnormality of terminal ileum

**Differs from Ulcerative colitis which has these symptoms:**

- bloody diarrhea with cramps in lower abdomen
- mild abdominal tenderness, weight loss, fever
- rectal exam may show perianal irritation, fissures, hemorrhoids, fistulas, abscesses
- diagnosis confirmed by x-ray and sigmoidoscopy (internal exam of colon)

Crohn's is characterized by inflammatory reaction throughout entire thickness of bowel wall. In approx. 40% of cases granulomas are either poorly developed or totally absent. Crohn terms this disease in 1932 saying it was localized to segments in the ileum, the terminal portion of the small intestine. However, the same granulomatous process may involve mucosa of the mouth, esophagus, stomach, duodenum, jejunum and colon.

**Crohn's disease of small intestine** is also known as regional enteritis, while involvement of colon is known as Crohn's disease of colon, or granulomatous colitis.

**Ulcerative colitis is non-specific inflammatory response to limited largely of lining of colon.** Crohn's and ulcerative colitis share many common features.

**Causes:**

- some believe genetic, some think microorganisms/bacteria are involved (no proof), there is evidence of immune system disturbances, dietary factors is the most important causative factor.
  - western diet supports the disease while it is non-existent in primative countries. Patients usually have eaten diet of more refined sugar, less fruit and vegetables and fibre.

**Causes of malnutrition in inflammatory bowel disease:**

* decreased oral intake
* disease induced (pain, diarrhea, nausea, anorexia)
* doctor induced (restrictive diets with supplementation
* malabsorption
* decreased absorptive surface due to disease or resection
* bile salt deficiency after surgical resection

*** bacterial overgrowth**
*** drugs (eg. corticosteroids, sulphasalazine, cholestyramine)**
*** increased secretion and nutrient loss**
*** protein-losing enteropathy**
*** electrolyte, mineral and trace mineral loss in diarrhea**
*** increased utilization and increased requirements**
*** inflammation, fever, infection**
*** increased intestinal cell turnover.**

## DIET:

- **eliminate all allergens, wheat, corn, dairy and other food sensitivities the person may have**
- **high in complex carbos and fiber, low in sugar and refined carbos**
- **adequate calorie intake**
- **elemental diet effective non toxic alternative to corticosteroids for acute IBD. Contains all essential nutrients with protein being provided only as predigested or free form amino acids**
- **elimination diets: food allergy considered causative factor. This therapy has been successful.**
- **high complex carbos, high fiber - high fiber has favourable effect. Fiber has profound effect on intestinal environment to promote more optimal intestinal flora composition, considering high intolerance to wheat and known roughness of wheat bran, supplemental wheat bran is not the fiber of choice for these patients.**

## SUPPLEMENTS:

**Considerations:**
**- decreased food intake and deficient calorie intake must be fixed. Weight loss is common because of pain after eating.**
**- malabsorption is common, particular fats**
**- 600 mg magnesium a day in divided doses.**
**- 50 mg Zinc picolinate**
**- 50,000 IU Vit. A daily**
**- 200 IU Vit. E**
**- 500 mg mixed flavonoids 20 minutes before meals**
**- loss of plasma proteins across damaged and inflamed mucosa despite high protein intake. Chronic loss of blood often leads to iron depletion, anemia**
**- common drugs used: corticosteroids, sulphasalzine.**

**Corticosteroids stimulate protein catabolism, depress protein synthesis, decrease absorption of calcium and phosphorus, increase urinary excretion of Vit. C, calcium, potassium, zinc, increase blood glucose, serum triglycerides and serum cholesterol, increase requirements for B6, ascorbic acid, folate and Vit. D, decrease bone formation and impair wound healing.**

**Sulphalazine inhibits absorption and transport of folate, decreases serum folate and iron, increases urinary excretion of ascorbic acid.**
**- if cycle can't be broken, see special diet for crohn's and celiac disease that needs to be adhered to for 1-2 years.**

**- typical deficiencies in patients with IBD (irritable bowel syndrome):**
**Iron, Vit B12, Folate, Magnesium, Potassium,**
**Retinol, Ascorbate, 25-OH-Vit D, Zinc.**
**- zinc is a common complication due to low dietary intake. Many with magnesium deficiency shows weakness, anorexia, low blood pressure, confusion, hyperirritability, tetany, convulsions (taking 200-400 mg elemental magnesium intravenously may be needed)**
**- taking NAG (N-acetyl-glucosamine) for a few months is often all that is needed by many people.**
**- since iron supplementation promotes intestinal infection, an attempt to increase iron stores by improving absorption by using Vit. C is recommended.**
**- diarrhea is associated with potassium and other electrolyte deficiencies. Extra potassium can have a significant effect.**
**- Low serum Vit. A occur in 20% of Crohn's patients. Long term testing revealed taking 100,000 IU didn't have much effect on helping but zinc supplementation will often normalize disturbances of Vit. A metabolism.**
**- Vit. D deficiency is common. Those are at risk for developing metabolic bone diseases such as osteoporosis and osteomalacia.**
**- Vit E deficiency can occur. Supplement with 270 IU per day to bring recovery over a period of 2 years. Vit. E will inhibit inflammation and reduce free radical damage.**
**- folate deficiency (folic acid) promotes further malabsorption due to altered structure of the intestinal mucosal cells. These cells have a rapid turnover (1-4 days) and need to have a constant supply of folic acid.**
**- since Vit B12 is absorbed at the portion of the intestine most commonly affected with Crohn's (terminal ileum), deficiency is common. Often the terminal ileium is surgically removed. If the length of the resection is less than 60 cm, or the extend of inflammatory lesion is less than 60 cm, adequate absorption may occur.**
**- Vit. C is important in the prevention of fistula formation (fistula is an abnormal passageway between 2 organs eg. colon and bladder), it has been shown that patients with fistulas have lower ascorbic acid levels than patients without fistulas.**

## BOTANNICAL

**- flavonoids, esp. quercetin**

## HERBAL FORMULA:

**8 parts each of Althea (marshmallow) - demulcent**
**4 parts Baptisia tinctora (wild indigo)- gastro infection**
**8 parts Echinacea angustifolia - antibacterial**
**8 parts Geranium maculation - gastro haemostatic**
**8 parts Hydrastis canadensis - inhibit growth of disease bacteria**
**8 parts Ulmus fulva - (slippery elm) - demulcent**
**8 parts cabbage powder - heals ulcers**
**2 parts pancreatin - assists digestive process**
**1 part niacinamide - anti-inflammatory**
**2 parts duodenal substance - heals gastro ulcers**
**Grind and cap into 00 capsules. Take 2-3 capsules with each meal**