



## Your Monthly Update

*Dear Colleague*

Welcome to the April 07 newsletter from Pure Bio Ltd.

### Did you know. . .?

Mass deforestation of the Amazon rainforest is occurring to accommodate the soya industry – between 2003 and 2004, land almost the size of Belgium was destroyed and deforestation of land the size of a football pitch is currently occurring **every 10 seconds**. One square kilometre of Amazon rainforest can contain 9,790 tonnes of living plants and one in five of all the birds in the world live in the Amazon rainforest. National Geographic estimates that, at the current rate, in two decades the Amazon rainforest will be reduced by 40%.

Our topic for this month, in response to a specific request, is:

## Ulcerative Colitis

Ranking	Nutritional Supplements	Botanical Medicine
Secondary	Fish oil Folic acid Probiotics	Aloe Boswellia DHEA Psyllium Wheat grass (juice)
Other		Calendula Chamomile Curcumin Flaxseed Licorice Marshmallow Myrrh St. John's wort (oil, taken as an enema) Yarrow
<p><b>Primary</b> – Reliable and relatively consistent scientific data showing a substantial health benefit.</p> <p><b>Secondary</b> – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.</p> <p><b>Other</b> – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.</p>		

Ulcerative colitis (UC) is a chronic disease that causes inflammation and ulcers in the innermost layers of the large intestine. In UC, swelling typically occurs in the rectum and lower colon, but the inflammation can spread throughout the entire colon. The ulcers bleed and produce pus and mucus, and the inflammation causes the colon to empty frequently, resulting in diarrhoea.

UC is a rare, but serious disease that affects 50 out of every 100,000 people in the UK. Although the condition most commonly affects those between the ages of 15 and 35, children and older adults may also develop the disease. UC occurs five times more frequently in those with a Jewish heritage than it does in the general population. Although most people with UC can be successfully treated without surgery, roughly 25% will need a colectomy (surgical removal of the colon).

## Symptoms

The most common signs and symptoms of UC include abdominal pain and bloody diarrhoea. The symptoms can range from mild to severe and may come on either very suddenly or more gradually.

Other common symptoms of UC include:

- Frequent, even continuous diarrhoea
- Bloody stool
- Urgent desire to defaecate
- Abdominal cramps and pain
- High fever
- Rapid heartbeat
- Weight loss
- Anaemia
- Loss of appetite
- Joint aches

People with UC are at increased risk for malnutrition. UC can also cause a host of other problems, including arthritis, eye infections, liver disease, skin rashes, blood clots, or gallstones. Although it is not clear why such problems occur outside the colon, some researchers speculate that they may be linked to a faulty immune response.

## Causes

There are many theories regarding the cause of UC, but none have been proven. The most likely theory is that UC is caused by a variety of factors ranging from genetics, faulty immune system reactions, stress, environmental influences and diet. For example, some people are genetically at risk for UC and an infection or other toxin may stimulate inflammation of the large intestine. In some cases, stressful events or sensitivities to certain foods may trigger symptoms of UC.

## Risk Factors

- Family history of UC
- Jewish heritage, especially Ashkenazi Jews

- A diet high in sugar, cholesterol, and fat (particularly from meat and dairy products)
- Stress

## Dietary Modification

Preliminary evidence suggests that certain dietary patterns may be associated with UC. For example, some studies indicate that low fruit and vegetable consumption and high fat and sugar consumption may increase an individual's risk for developing UC. Studies also suggest the following:

- ❑ A bland, low-fibre diet is best during acute flare-ups.
- ❑ Regular intakes of fruits and vegetables, and lowered fat and sugar consumption when UC is not active may reduce the likelihood of flare-ups.
- ❑ High intakes of fluids and foods rich in magnesium and vitamin C on a regular basis may lower the risk of developing inflammatory bowel diseases.
- ❑ Certain foods may aggravate symptoms of UC (including chocolate, dairy products, fats, and artificial sweeteners) and should be avoided by people with the condition.
- ❑ After surgery, people with UC should avoid foods high in oxalic acid (for example, spinach, rhubarb, beets, coffee, tea, diet sodas, and chocolate) because oxalates can increase the risk of kidney stones.

In two studies, people with a high intake of animal fat, cholesterol, or margarine had a significantly increased risk of UC, compared with people who consumed less of these fats. Although these associations do not prove cause-and-effect, reducing one's intake of animal fats and margarine is a means of improving overall health and possibly UC as well.

There is preliminary evidence that people who eat fast food at least twice a week have nearly four times the risk of developing UC than people who do not eat fast food.

More than a half-century ago, several doctors reported that food allergies play an important role in some cases of UC. Since that time, many doctors have observed that avoidance of allergenic foods will often reduce the severity of UC and can sometimes completely control the condition. In other old studies, milk has been reported to trigger UC, and people with UC were found to have antibodies to milk in their blood, a possible sign of allergy. Today the relationship between food allergies and UC remains controversial and is not generally accepted by the conventional medical community.

In a preliminary study, 39 patients with mild to moderate ulcerative colitis experienced significant improvement after receiving 30 grams (about 1 oz) per day of a germinated barley product for four weeks.

## Lifestyle Modification

For unknown reasons, smokers have a lower risk of UC. The nicotine patch has actually been used to induce remissions in people with UC, although this treatment has been ineffective in preventing relapses. On the other hand, Crohn's disease, which is in many ways similar to UC, is made *worse* by smoking. Despite the possible protective effect of smoking in people with UC, a strong case can be made that risks of smoking outweigh the benefits; even the use of nicotine patches carries its own side effects and remains experimental.

At least one study has shown that IBD often begins within 1 year of a very stressful life event, such as the death of a family member. In addition, people with UC report that stress worsens their symptoms. Therefore, relaxation techniques, such as yoga, tai

chi, and meditation are worth considering, particularly for people with chronic stress in their lives.

Exercise may also be very helpful for those with UC. Although exercise is generally considered safe for people with UC, those with the condition must take certain precautions when exercising and should talk to their healthcare practitioners before starting an exercise program. It is especially important for people with UC to drink one to two glasses of water before exercising and one glass of water every twenty minutes while exercising to prevent dehydration. Exercise should be avoided during symptom flare-ups or if the individual has a fever.

## Medications

- **Sulfasalazine**—the most commonly used medication for UC; taken orally; decreases inflammation, reduces frequency of recurrences
- **Mesalamine**—decreases inflammation; taken orally or as an enema
- **Corticosteroids**—reduce inflammation by decreasing the production of prostaglandins (fatty acids that produce pain and inflammation); taken orally, given intravenously in severe cases, or may be prescribed as an enema
- Medications that suppress the immune system (such as **azathioprine** and **cyclosporine**)
- **Antibiotics**

Medications used to treat diarrhoea (such as **diphenoxylate**, **loperamide**, or **opiates**) must be used only under medical supervision and with extreme caution. These medications slow down the normal movements of the gastrointestinal tract and, in severe cases of UC, may cause a complication known as toxic megacolon.

## Nutritional Supplement Treatment Options

**Folic Acid** - UC is linked to an increased risk of colon cancer. Studies have found that people with UC who take folic acid supplements or who have high blood levels of folic acid have a reduced risk of colon cancer compared with people who have UC and do not take folic acid supplements. Although these associations do not prove that folic acid was responsible for the reduction in risk, this vitamin has been shown to prevent experimentally induced colon cancer in animals. Moreover, low blood folic acid levels have been found in more than half of all people with UC. People with UC who are taking sulfasalazine - which inhibits the absorption of folic acid - are at a particularly high risk of developing folic acid deficiency. Folic acid supplementation may therefore be important for many people with UC. Since taking folic acid may mask a vitamin B12 deficiency, however, people with UC who wish to take folic acid over the long term should have their vitamin B12 status assessed by a physician –

- **Folic Acid Liquid PE**
- **Folate PE**

Alcohol consumption is known to promote folic acid deficiency and has also been linked to an increased risk of colon cancer. People with UC should, therefore, keep alcohol intake to a minimum.

**EPA/DHA** - Preliminary and double-blind trials have found that fish oil supplementation reduces inflammation, decreases the need for anti-inflammatory drugs, and promotes normal weight gain in people with UC. However, fish oil has not always been effective in clinical trials for UC; and has consistently been found less effective than

sulfasalazine. Some experts suggest that omega-3 fatty acids may prove particularly valuable when used in combination with sulfasalazine or other medications. Amounts used in successful clinical trials provided 3.2 grams of EPA and 2.2 grams of DHA per day -

- [EPA/DHA Essentials PE](#)
- [EPA/DHA Liquid PE](#)

**Butyrate** - A fatty acid called butyrate, which is synthesized by intestinal bacteria, serves as fuel for the cells that line the small intestine. Administration of butyrate by enema has produced marked improvement in people with UC in most, but not all, preliminary trials. Butyrate taken orally is not likely to be beneficial, as sufficient quantities do not reach the colon by this route. Although butyrate enemas are not widely available, they can be obtained by prescription through a compounding pharmacy, which prepares customized prescription medications to meet individual patient needs.

**N-acetyl Glucosamine** - Preliminary evidence suggests that N-acetyl glucosamine (NAG) supplements may improve symptoms of UC in children with IBD who did not improve after using other treatments, but further research is needed to determine whether the substance is safe and effective for the treatment of UC

**DHEA** - In a preliminary trial, 6 of 13 people with ulcerative colitis went into remission after taking 200 mg per day of DHEA for eight weeks. Such large doses of DHEA has the potential to cause adverse side effects and should only be used under the supervision of a prescribing doctor.

**Probiotics** - In preliminary and double-blind trials, a probiotic supplement (in this case, a non-disease-causing strain of *Escherichia coli*) was effective at maintaining remission in people with UC. In a double-blind trial, a combination probiotic supplement containing Lactobacilli, Bifidobacteria, and a beneficial strain of Streptococcus has been shown to prevent pouchitis, a common complication of surgery for UC. People with chronic relapsing pouchitis received either 3 grams per day of the supplement or placebo for nine months. Eighty-five percent of those who took the supplement had no further episodes of pouchitis during the nine-month trial, whereas 100% of those receiving placebo had relapses within four months. Preliminary evidence suggests that combination probiotic supplements may be effective at preventing UC relapses as well -

- [Lactobacillus Acidophilus PE](#)
- [Lactobacillus Sporogenes PE](#)
- [Probiotic 5 PE](#)
- [Saccharomyces boulardii PE](#)

**Bromelain** - There have been a few case reports in the medical literature about people with mild forms of ulcerative colitis whose symptoms have improved by taking bromelain. Bromelain is known to both reduce inflammation and help digestion. In theory, therefore, this supplement may prove beneficial for people with ulcerative colitis – [Bromelain PE](#)

In a preliminary trial, people with UC significantly improved on a sugar-free, low-allergen diet with additional nutritional supplementation that included a multivitamin-mineral supplement (2–6 tablets per day); a fish oil supplement (400 mg per day); borage oil (400 mg per day); flaxseed oil (400 mg per day); and a probiotic formula containing *Lactobacillus acidophilus* and other species of beneficial bacteria.

## Botanical Treatment Options

**Boswellia** - A small clinical study found that people with UC taking 550 mg of boswellia gum resin TID for six weeks had similar improvement in symptoms and severity of the disease as those people with UC taking sulfasalazine. Overall, 82% of patients receiving boswellia, along with 75% of patients taking sulfasalazine, went into remission – ***Boswellia PE***

**Psyllium** - In a preliminary trial, people with UC remained in remission just as long when they took 20 grams of ground psyllium seeds BID with water as when they took mesalamine. The combination of the two was slightly more effective than either alone. Controlled trials are now needed to confirm a therapeutic effect of psyllium for UC.

**Wheat Grass Juice** - In a controlled trial, supplementation with wheat grass juice for one month resulted in clinical improvement in 78% of people with ulcerative colitis, compared with 30% of those receiving a placebo. The amount of wheat grass used was 20 ml per day initially; this was increased by 20 ml per day to a maximum of 100 ml per day (approximately 3.5 ounces).

**Chamomile** - German doctors practicing herbal medicine often recommend chamomile for people with colitis. A cup of strong tea consumed TID is standard recommendation.

**Curcumin** is a compound in turmeric (*Curcuma longa*) that has been reported to have anti-inflammatory activity. In a preliminary trial, five of five people with chronic ulcerative proctitis (a condition similar to ulcerative colitis) had an improvement in their disease after supplementing with curcumin. The amount of curcumin used was 550 mg BID for one month, followed by 550 mg TID for one month – ***Curcumin PE***

Enemas of oil of St. John's wort may also be beneficial.

**Aloe vera** juice has anti-inflammatory activity and has been used by some doctors for people with UC. In a double-blind study of people with mildly to moderately active ulcerative colitis, supplementation with aloe resulted in a complete remission or an improvement in symptoms in 47% of cases, compared with 14% of those given a placebo (a statistically significant difference). No significant side effects were seen. The amount of aloe used was 100 ml (approximately 3.5 ounces) BID for four weeks. Other traditional anti-inflammatory and soothing herbs include:

- **Calendula**
- **Flaxseed**
- **Licorice**
- **Marshmallow**
- **Myrrh**
- **yarrow**

Many of these herbs are most effective, according to clinical experience, if taken internally as well as in enema form. Enemas should be avoided during acute flare-ups but are useful for mild and chronic inflammation.

## **Other Considerations**

### **Pregnancy**

Fifty percent of women in remission experience a recurrence of UC when they become pregnant, usually during the first trimester or during the postpartum period. For this reason, such women should continue maintenance therapy under the guidance of their healthcare practitioner. Corticosteroids or sulfasalazine are considered safe during this time because these drugs are not believed to harm the foetus. Pregnant women with UC do not have increased risk for stillbirths or premature deliveries.

Pregnant women should avoid high doses of vitamins.

## Warnings and Precautions

People with UC should avoid herbs that loosen the bowels. These include:

- Buckthorn bark (*Rhamnus frangula*)
- Cascara sagrada bark (*Rhamnus purshiana*)
- Senna leaf and senna pod (*Senna alexandrina*)

The following foods should also be avoided by people with UC because they worsen symptoms of the disease:

- Milk (and milk products)
- Spicy foods
- Fats
- Sugars

Following surgery, people with UC should avoid the following foods as they may increase the risk for kidney stones:

- Spinach
- Rhubarb
- Beets
- Coffee
- Tea
- Diet sodas
- Chocolate

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