



Your Monthly Update

Dear Colleague

Welcome to the February 07 newsletter from Pure Bio Ltd.

Did you know...?

Pure Bio now supplies Liquid Zinc (as Zinc Picolinate) and Liquid Magnesium (as Magnesium Chloride)

ALL MINERALS ARE ABSORBED IN IONIC FORM, MAKING PURE BIO LIQUID FORMULAS THE MOST HIGHLY BIO-AVAILABLE FORM.

For more details, please see the website (under minerals section and on the “New Products” page), or contact the office – 01403 730342 - for product information sheets and your free sample.

Our topic for this month is:

Gastro-oesophageal Reflux (GOR)

Ranking	Nutritional Supplements	Botanical Medicine
Secondary		Licorice
Other	Digestive enzymes Hydrochloric acid Proteolytic enzymes L-Glutamine	Aloe Bladderwrack Marshmallow Slippery elm

Primary – Reliable and relatively consistent scientific data showing a substantial health benefit.

Secondary – Contradictory, insufficient, or preliminary studies suggesting a health benefit or minimal health benefit.

Other – An herb is primarily supported by traditional use, or the herb or supplement has little scientific support and/or minimal health benefit.

Gastro-oesophageal reflux is a condition where the lower oesophageal sphincter (or LOS - the muscular ring at the lower end of the oesophagus) is abnormally relaxed and allows the stomach's acidic contents to flow back or reflux into the oesophagus. It can also cause heartburn.

Causes

Symptoms typically occur after eating a large or fatty meal or drinking alcohol

Lying down, bending over or bending and lifting can all cause reflux

Pregnancy

Because the uterus increases in size during pregnancy, it presses on the stomach, creating higher pressure inside it, which increases the tendency to reflux. In addition, hormonal changes lead to relaxation of the oesophageal sphincter during pregnancy.

Meals

The more the stomach is stretched by food, the higher the tendency to reflux. Avoiding large rich meals, particularly in the evening, reduces the tendency to reflux.

Foods

Chocolate, peppermint, coffee, fruit juices and alcohol all prevent the oesophageal sphincter from working properly.

Tobacco

Tobacco prevents the oesophageal sphincter from working properly, reduces the rate at which the stomach empties and increases stomach acid production.

Constipation

Constipation increases the tendency to reflux by raising pressure inside the upper abdominal cavity.

Symptoms

- A painful or burning sensation in the upper abdomen or chest, sometimes radiating to the back (heartburn).
- The acid reflux may reach the pharynx and mouth. It is sour and may burn.
- A small number of patients have difficulties breathing and suffer from hoarseness because the refluxed fluid irritates the larynx and respiratory tract.
- Excess belching is common.

Risk Factors

Prolonged exposure to refluxed acid leads to oesophagitis (inflammation of the oesophagus). Long-standing oesophagitis may be complicated by the formation of scar tissue that contracts and results in a narrowing (stricture) in the affected part of the oesophagus. This can make it difficult or even impossible to swallow. It is a serious condition that requires urgent assessment and treatment, but, fortunately, this complication is relatively rare.

It can cause ulceration, leading to bleeding and an iron deficiency, which may develop into anaemia due to a chronic blood loss.

Dietary Modification

Historically, low-fat diets have been recommended to patients with GOR because fatty foods appeared to be associated with increased heartburn and fatty foods had been shown to weaken the LOS in both healthy people and people with GOR. A number of recent studies, however, have found no correlation between the fat content of a meal

and subsequent symptoms of heartburn and reflux. Another study found that hospitalizations due to GOR were no more likely for people who ate high-fat diets than for those on low-fat diets. One study compared different fast foods for their likelihood to cause reflux symptoms and found that chilli and red wine caused more symptoms than higher-fat foods such as hamburgers and French fries.

In a preliminary study of obese people with GOR, eating a very-low-carbohydrate diet (less than 20 grams of carbohydrate per day) for six days resulted in a significant improvement in symptoms of GOR. Additional research is needed to determine whether this type of diet would be safe and effective for long-term use.

Eating foods or drinking beverages flavoured with spearmint, peppermint, or other spices with strong aromatic oils causes relaxation of the LOS and can contribute to symptoms in people with GOR. Chocolate also relaxes the LOS and can cause heartburn. Acidic beverages like juices, coffee, and tea have also been linked to increased heartburn pain, as have carbonated drinks, alcohol and milk.

Infants who suffer from GOR may have a true allergy to cows' milk. Some small studies estimate that milk allergy is a cause in about 20% of infants with GOR, but a larger study of 204 infants with GOR diagnosed cows' milk allergies in 41%. For these infants, reflux symptoms improved with elimination of milk products from the diet. Some researchers advise a trial of cows' milk-elimination in all infants suffering from GOR. Infants with a condition known as multiple food protein intolerance in infancy (MFPI) have been shown to have a high incidence of GOR and may only improve when amino-acid based formula is used in place of other formulas.

Lifestyle Modification

Smoking weakens the LOS and is a strong risk factor for GOR. A study of infants with GOR found that exposure to cigarette smoke in the environment is associated with reflux, leading the authors to conclude that second-hand smoke contributes directly to GOR in infants. No similar studies on environmental smoke have been done with adults. Psychological stress and alcohol have also been shown to be associated with the weakening of the LOS and symptoms of GOR.

A number of studies have found that obesity increases the risk of GOR. Obese people tend to have weaker sphincters and subsequently are more prone to development of hiatus hernia. It has been suggested that obesity may contribute to GOR by increasing abdominal pressure, but this there is no research to support this theory. The benefit of weight loss for obese patients with GOR is controversial. Some researchers have found that symptoms of GOR are reduced with weight loss, while others have seen no change with weight loss and even increased symptoms in patients with massive weight loss.

Lying down prevents gravity from keeping the stomach contents well below the opening from the oesophagus. For this reason, many authorities recommend that people with GOR avoid lying down sooner than three hours after a meal, and suggest elevating the head of the bed to prevent symptoms during sleep.

GOR occurs more frequently during exercise than at rest and can be a cause of chest pain or abdominal pain during exertion. One study found that increased intensity of exercise resulted in increased reflux in both trained athletes and untrained people. In another study, running produced more reflux than less jarring activities, such as bicycling; while weight training produced few reflux symptoms. Eating just before exercise has been found to further aggravate GOR. On the other hand, a recent survey found that people who participate in little recreational activity were more likely than active people to be hospitalized for GOR. It makes sense for people with GOR to use exercise as part of a healthy lifestyle, perhaps choosing activities that are less likely to cause reflux symptoms.

Conventional Treatment

The so-called "proton pump inhibitors" such as Prilosec and Prevacid, and the H₂ blocker agents such as Zantac, Pepcid and Tagament, are commonly prescribed for oesophageal reflux.

However, these drugs dramatically reduce the amount of hydrochloric acid production in the stomach, thereby diminishing drastically the ability to digest food properly. This reduction in the amount of stomach acid also reduces a very important defence mechanism against food-borne infections and increases both the likelihood of food poisoning; as well as an endogenous dysbiosis, frequently leading to candidiasis. Partially digested food entering the gastro-intestinal tract also increases the risk of secondary degenerative diseases; autoimmune disorders and food sensitivities. Two studies with laboratory mice, conducted by Howard Hughes Medical Institute scientists at the University of Michigan Medical School clearly indicated that reducing the concentration of hydrochloric acid in the stomach was overtly detrimental to overall health and digestive capacity.

Many people suffering acid reflux in later years do so due to the naturally diminishing production of hydrochloric acid by the stomach. This leads to partially digested proteins passing from the stomach into the duodenum and the ensuing putrefaction leads to burning, gas and discomfort. The best solution for such people is:

- 1) Supplementing with hydrochloric acid before each main meal
- 2) Avoiding protein and carbohydrate combinations in the same meal; due to the extreme variation in breakdown time in the stomach.
- 3) Eating smaller, more frequent meals.

Nutritional Supplement Treatment Options

Hydrochloric acid ([Betaine HCl Pepsin](#)) and pancreatic enzymes ([Pancreatic Enzyme Formula](#) or [Pancreatic VegEnzymes](#)) will generally improve digestion and will help prevent reflux.

Probiotics help to maintain a normal gut bacterial flora.

Bromelain – a proteolytic enzyme

I-Glutamine – improves nutrient absorption and minimises the amount of undigested food or environmental toxins passing through the intestinal barrier.

Proteolytic enzymes – e.g. [A.I. Enzymes](#) - to promote the breakdown of carbohydrates, protein and fat.

Botanical Treatment Options

Licorice, particularly as chewable deglycrrhizinated licorice ([DGL Plus](#)), has been shown to be an effective treatment for the healing of stomach and duodenal ulcers; in an uncontrolled trial, licorice was effective as a treatment for aphthous ulcers (canker sores). A synthetic drug similar to an ingredient of licorice has been used as part of an effective therapy for GOR in both uncontrolled and double-blind trials. In a comparison trial, this combination proved to be as effective as cimetidine (Tagamet®), a common drug used to treat GOR. However, licorice itself remains unexamined as a treatment for GOR.

Garlic is extremely effective in optimizing bowel flora and killing pathogenic organisms such as H. pylori. H. pylori is the only bacterial organism in the stomach that cannot be killed by hydrochloric acid. 75% of people with gastritis test positive for Helicobacter pylori, although many other species of bacteria can trigger inflammatory changes too, and often co-exist along with Helicobacter.

Other herbs traditionally used to treat reflux and heartburn include digestive demulcents (soothing agents) such as aloe vera, slippery elm, bladderwrack and marshmallow. None of these have been scientifically evaluated for effectiveness in GOR. However, the popular drug Gaviscon®, contains magnesium carbonate (as an antacid) and alginic acid which is derived from bladderwrack.

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