Your Monthly Update

Dear Colleague

Welcome to the August newsletter from Pure Bio Ltd.

We always welcome feedback and suggestions.

We have had a specific request from a practitioner to cover the topic of dyspepsia, so that is our focus for this month. Please feel free to submit requests for any topics that would be of clinical benefit to you.

Dyspepsia / Heartburn

Ranking	Nutritional Supplements	Botanical Medicine
Primary	Lactase (for lactose intolerance only)	Artichoke
Secondary	Enzymes (Lipase) Vitamin B12 (for people with the combination of low vitamin B12 levels, delayed gastric emptying, and *Helicobacter pylori* infection)	Fennel Ginger Peppermint Sage Turmeric
Other	Betaine HCl (in cases of hypochlorhydria)	Barberry Basil Centaury Chamomile Chaparral Cinnamon Cloves Dandelion (leaves and root) Devil's claw European angelica Gentian Goldenseal Juniper Licorice (DGL) Rooibos Slippery elm (symptom relief) Thyme Vervain Wormwood Yellow dock
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.

Prescription drugs and their Action.

Known as histamine (H_2) blockers, these popular drugs (Tagamet, Pepcid, Axid, and Zantac) are available over the counter and by prescription. Not only do they take a while to work, but there is concern that they can mask the symptoms of an active ulcer and existing cancer of the stomach or oesophagus. Many drugs interact with H_2 blockers (particularly with Cimetidine - Tagamet). These drugs decrease the body's ability to excrete caffeine, and individuals who consume large quantities of caffeine may experience tremors, insomnia, or heart palpitations. Cimetidine may increase the likelihood of alcohol intoxication.

H_2 blockers also produce side effects such as dizziness, depression and hallucinations in elderly individuals, or in those who are unable to adequately excrete the drugs (i.e. people with kidney disease). High doses, taken over a long time, have caused breast enlargement and sexual dysfunction in men. H_2 blockers can also cause liver toxicity or decreased platelet counts.

Proton Pump Inhibitors (PPIs) are stronger drugs used to treat acid-induced inflammation, ulcers of the stomach and duodenum, and Gastro-oesophageal Reflux Disease (GORD). These drugs block acid production and have numerous side effects. The most common include headache, diarrhoea, stomach or abdominal pain, increased gas or bloating, vomiting, rash, and dizziness. Nervousness, abnormal heartbeat, muscle pain, weakness, leg cramps, and water retention occur frequently.

Multi-million pound promotions to the public were launched to promote the fact that heartburn and indigestion are caused by too much acid, which can be 'blocked' (*only with these pharmaceutical products, of course!*) at minimal risk. Oddly enough, the FDA has never required the companies advertising these products to document their claims that indigestion and heartburn are actually caused by hyperacidity.

Dietary Modification

Doctors have observed that heartburn and indigestion may be relieved in some people by avoiding or reducing the intake of caffeine and alcohol. In addition, some people will have symptoms due primarily to food allergies or intolerances. While most practitioners are clinically aware that there is an important connection between diet and intestinal symptoms, there are few published data documenting such associations. Dietary modifications should be undertaken with the help of a healthcare practitioner.

Patients should always be tested for the presence of H. pylori, as this is a common underlying cause.

Recommended product for H. pylori: Formula SF734 (Thorne)

People who eat too fast or fail to chew their food adequately may also experience symptoms of indigestion or heartburn.

Hydrochloric acid naturally decreases with age – production at 60 years is only 20% of that at 20 years. Decreased HCl means decreased capacity to complete the first stage of digestion, particularly of protein; resulting in partially undigested proteins passing into the small intestine. This leads to gas production from mid-stage metabolites and rotting food. For this reason, as people age, their digestive system will fair much better

with a food-combining diet which avoids proteins and carbohydrates being eaten at the same meal. Protein is also best eaten earlier in the day, when HCl is naturally higher.

Recommended product: Betaine HCl Pepsin (PE)

Nutritional Supplement Treatment Options

Lipase, a pancreatic enzyme, aids in the digestion of fats and may improve digestion in some people. In a double-blind trial, a timed-release form of pancreatic enzymes was shown to significantly reduce gas, bloating, and fullness after a high-fat meal. Participants in this study took one capsule immediately before the meal and two capsules immediately after the meal. The three capsules together provided 30,000 USP units of lipase, 112,500 USP units of protease, and 99,600 USP units of amylase. However, the amount of pancreatic enzymes needed may vary from person to person, and should be determined with the help of a practitioner.

Recommended product: Pancreatic Enzyme Formula (PE)

Vitamin B12 supplementation may be beneficial for a subset of people suffering from indigestion: those with delayed emptying of the stomach contents in association with *Helicobacter pylori* infection and low blood levels of vitamin B12. In a double-blind study of people who satisfied those criteria, treatment with vitamin B12 significantly reduced symptoms of dyspepsia and improved stomach-emptying times.

Recommended product: Methylcobalamin (PE)

Botanical Treatment Options

Three major categories of herbs are used to treat indigestion when no cause for the condition is known: bitters (digestive stimulants), carminatives (gas-relieving herbs), and demulcents (soothing herbs).

Action	Herbs
Bitter digestive stimulants	Artichoke, Barberry, Centaury, Dandelion, Devil's claw, Gentian, Goldenseal, Juniper, Oregon grape, Vervain, Wormwood, Yellow dock
Carminatives	Anise, Basil, Chamomile, Cinnamon, Cloves, Coriander, Dill, European angelica, Fennel, Ginger, Peppermint, Rosemary, Sage, Thyme, Turmeric
Demulcents	Licorice Marshmallow, Slippery elm
Multiple, unclear actions	Chaparral

Bitter herbs are thought to stimulate digestive function by increasing saliva production and promoting both stomach acid and digestive enzyme production. As a result, they are particularly used when there is low stomach acid but not in heartburn (where too much stomach acid could initially exacerbate the situation). These herbs literally taste bitter. Bitters are generally taken either by mixing 1–3 ml tincture into water and sipping slowly 10–30 minutes before eating, or by making tea, which is also sipped slowly before eating.

Artichoke, in addition to being an edible plant, is a mild bitter. Extracts of artichoke have been repeatedly shown in double-blind research to be beneficial for people with indigestion. Artichoke is particularly useful when the problem is lack of bile production by the liver. Extracts providing 500–1,000 mg per day of cynarin, the main active constituent of artichoke, are recommended by practitioners.

Wormwood is sometimes used in combination with carminative herbs for people with indigestion. One double-blind trial found that a combination with peppermint, caraway, and fennel was useful in reducing gas and cramping in people with indigestion. Other bitters are gentian, dandelion, devil's claw, juniper, and centaury. The amounts used are the same as the general recommendations for bitters when they are employed for the treatment of indigestion.

Some bitters widely used in traditional medicine in North America include yellow dock, goldenseal, Oregon grape, and vervain. Oregon grape's European cousin barberry has also traditionally been used as a bitter. Animal studies indicate that barberry and Oregon grape, in addition to stimulating digestion like other bitters, may relieve spasms in the intestinal tract.

Carminatives (also called aromatic digestive tonics or aromatic bitters) may be used to relieve symptoms of indigestion, particularly when there is excessive gas. It is believed that carminative agents work, at least in part, by relieving spasms in the intestinal tract.

Among the most notable and well-studied carminatives are peppermint, fennel, and caraway. Double-blind trials have shown that combinations of peppermint and caraway oil and a combination of peppermint, fennel, caraway, and wormwood have been found to reduce gas and cramping in people with indigestion. Generally, 3–5 drops of natural essential oils or 3–5 ml of tincture of any of these herbs, taken in water BID–TID, can be helpful. Alternatively, a tea can be made by grinding 2–3 teaspoons of the seeds of fennel or caraway or the leaves of peppermint, and then simmering them in a cup of water (covered) for ten minutes. Drink three or more cups per day.

In a double-blind trial, the spice turmeric was found to relieve indigestion. Two capsules containing 250 mg turmeric powder per capsule were given QID.

Chamomile (German chamomile or *Matricaria recutita*) is effective in relieving inflamed or irritated mucous membranes of the digestive tract. Since heartburn sometimes involves reflux of stomach acid into the oesophagus, the anti-inflammatory properties of chamomile may also be useful. In addition, chamomile promotes normal digestion. However, modern studies to prove chamomile beneficial for people with heartburn or indigestion are lacking. Roman chamomile *(Anthemis nobilis)* has not been studied for indigestion though it has traditionally been used similarly to German chamomile.

Typically taken in tea form, chamomile is recommended TID–QID between meals. Chamomile tea is prepared by pouring boiling water over dried flowers, and steeping for several minutes. Alternatively, 3–5 ml of chamomile tincture may be added to hot water or 2–3 grams of chamomile in capsule or tablet form may be taken TID–QID between meals.

There are numerous other carminative herbs, including European angelica root *(Angelica archangelica)*, anise, Basil, cardamom, cinnamon, cloves, coriander, ginger, oregano, rosemary, sage, lavender, and thyme. Many of these are common kitchen herbs and thus are readily available for making tea to calm an upset stomach. Rosemary is sometimes used to treat indigestion in the elderly by European herbal practitioners. The German Commission E monograph suggests a daily intake of 4–6 grams of sage leaf.

Demulcents are the third category of herbs used to treat indigestion and heartburn. These herbs seem to work by decreasing inflammation and forming a physical barrier against stomach acid or other abdominal irritants. Examples of demulcent herbs include ginger, licorice, and slippery elm. *Recommended product* – DGL Plus (PE)

Ginger is a spice well known for its traditional use as a treatment for a variety of gastrointestinal complaints, ranging from flatulence to ulcers. Ginger has anti-inflammatory and anti-nausea properties. Ginger has been shown to enhance normal, spontaneous movements of the intestines that aid digestion.

Licorice protects the mucous membranes lining the digestive tract by increasing the production of mucin, a compound that protects against the adverse effects of stomach acid and various harmful substances. The extract of licorice root that is most often used by people with indigestion is known as deglycyrrhizinated licorice (DGL). Glycyrrhizin, which occurs naturally in licorice root, has cortisone-like effects and can cause high blood pressure, water retention, and other problems in some people. When the glycyrrhizin is removed to form DGL, the licorice root retains its beneficial effects against indigestion, while the risk of side effects is greatly reduced. The usual suggested amount of DGL is one or two capsules (250–500 mg per tablet) 15 minutes before food and one to two hours after food.

The mucilage content in slippery elm appears to act as a barrier against the damaging effects of acid on the oesophagus in people with heartburn. It may also have an anti-inflammatory effect locally in the stomach and intestines. Two or more capsules (typically 400–500 mg each) may be taken TID–QID. Alternatively, a tea is made by boiling 1/2–2 grams of the bark in 200 ml of water for 10 to 15 minutes, which is then cooled before drinking; three to four cups a day can be used. Tincture (5 ml TID) may also be taken but is believed to be less helpful.

Rooibos is traditionally used as a tea as a digestive aid. Unfortunately, no clinical trials have yet been published on this herb, so its efficacy is still unknown. Typically 1 to 4 teaspoons (5 to 20 mg) of rooibos is simmered in one cup of water (236 ml) for up to 10 minutes. Three cups of this tea can be drunk per day.

Chaparral tea has long been used to help calm upset stomachs. It is unclear into which of the above categories—if any—chaparral fits. This strong tasting tea is used only in small amounts. Modern research has not confirmed the usefulness of chaparral for indigestion, and there are some concerns about the safety of improper internal use of this herb.

For further information, contact:

Tracy S Gates
Director
PURE BIO LTD.
01403 730342
info@purebio.co.uk