

**Cloves** and **Cinnamon** are particularly effective against the *H. pylori* bacterium that often causes ulcers.

- \*Bhamarapravati et al: Extracts of spice and food plants from Thai traditional medicine inhibit the growth of the human carcinogen *Helicobacter pylori*. *Indian J Ophthalmol* 2009 May-Jun;57(3):185-9
- \*Tabak et al: Cinnamon extracts' inhibitory effect on *Helicobacter pylori*. *J Ethnopharma* 1999 Nov 30;67(3):269-77

**Coconut Water** or **Coconut Milk** helps prevent ulcers and reduces the toxic effects of aluminum poisoning. By replacing part of omega-6 fatty acid supplementation with medium-chain fatty acids of Coconut, colitis attacks are decreased.

- \*Mañé et al: Partial replacement of dietary (n-6) fatty acids with medium-chain triglycerides decreases the incidence of spontaneous colitis in interleukin-10-deficient mice. *J Nutr* 2009 Mar;139(3):603-10
- \*Nneli et al: Antiulcerogenic effects of coconut (*Cocos nucifera*) extract in rats. *Phytother Res* 2008 Jul;22(7):970-2
- \*Shadnia et al: Successful treatment of acute aluminium phosphide poisoning: possible benefit of coconut oil. *Hum Exp Toxicol* 2005 Apr;24(4):215-8

**Colic** in infants is a legitimate digestive complaint caused by a variety of reasons. A safe herbal treatment was found to be effective within one week by using Fenugreek, Fennel and Melissa (lemonbalm). A weak tea can be fed to the infant, if possible, and/or taken by the breast-feeding mother.

- \*Savino et al: A randomized double-blind placebo-controlled trial of a standardized extract of *Matricaria recutita*, *Foeniculum vulgare* and *Melissa officinalis* (ColiMil) in the treatment of breastfed colicky infants. *Phytother Res* 2005 Apr;19(4):335-40

**Cow milk elimination** helps infants overcome GERD that is not responsive to medications. Probiotics also help with infant and adult GERD (see below).

- \*Farahmand et al: Cow's milk allergy among children with gastroesophageal reflux disease. *Gut Liver* 2011 Sep;5(3):298-301

**Curcumin** (the active substance in Turmeric) reduces a number of chemicals that lead to colitis and damage the digestive tract. Since much of what we consume or put on our bodies have loads of chemicals, it is wise to take Curcumin as a supplement or use Turmeric in cooking as often as possible in order to decrease the harm caused by chemicals.

- \*Arafa et al: Prophylactic role of curcumin in dextran sulfate sodium (DSS)-induced ulcerative colitis murine model. *J Pharm Pharmacol* 2007 Jun;59(6):849-56
- \*Camacho-Barquero et al: Curcumin, a *Curcuma longa* constituent, acts on MAPK p38 pathway modulating COX-2 and iNOS expression in chronic experimental colitis. *Int Immunopharmacol* 2007 Mar;7(3):333-42
- \*Cong et al: Curcumin induces the tolerogenic dendritic cell that promotes differentiation of intestine-protective regulatory T cells. *Eur J Immunol* 2009 Nov;39(11):3134-46
- \*Deguchi et al: Curcumin prevents the development of dextran sulfate Sodium (DSS)-induced experimental colitis. *Dig Dis Sci* 2007 Nov;52(11):2993-8
- \*Hanai et al: Curcumin maintenance therapy for ulcerative colitis: randomized, multicenter, double-blind, placebo-controlled trial. *Clin Gastroenterol Hepatol* 2006 Dec;4(12):1502-6
- \*Hanai & Sugimoto: Curcumin has bright prospects for the treatment of inflammatory bowel disease. *J Lab Clin Med* 1997 Dec;130(6):576-84
- \*Jian et al: Preventive and therapeutic effects of NF-kappaB inhibitor curcumin in rats colitis induced by trinitrobenzene sulfonic acid. *World J Gastroenterol* 2005 Mar 28;11(12):1747-52
- \*Jiang et al: Curcumin-attenuated trinitrobenzene sulphonic acid induces chronic colitis by inhibiting expression of cyclooxygenase-2. *World J Gastroenterol* 2006 Jun 28;12(24):3848-53

- \*Lubbad et al: Curcumin reverses attenuated carbachol-induced contraction of the colon in a rat model of colitis. *Scand J Gastroenterol* 2009;44(2):187-94
- \*Lubbad et al: Curcumin attenuates inflammation through inhibition of TLR-4 receptor in experimental colitis. *Mol Cell Biochem* 2009 Feb;322(1-2):127-35
- \*Rafiee et al: Effect of curcumin on acidic pH-induced expression of IL-6 and IL-8 in human esophageal epithelial cells (HET-1A): role of PKC, MAPKs, and NF-kappaB. *Am J Physiol Gastroint Liver Physiol* 2009 Feb;296(2):G388-98
- \*Salh et al: Curcumin attenuates DNB-induced murine colitis. *Am J Physiol Gastrointest Liver Physiol* 2003 Jul;285(1):G235-43
- \*Sethi et al: Curcumin attenuates aluminium-induced functional neurotoxicity in rats. *Pharmacol Biochem Behav* 2009 Jul;93(1):31-9
- \*Sugimoto et al: Curcumin prevents and ameliorates trinitrobenzene sulfonic acid-induced colitis in mice. *Gastroenterol* 2002 Dec;123(6):1912-22
- \*Ukil et al: Curcumin, the major component of food flavour turmeric, reduces mucosal injury in trinitrobenzene sulphonic acid-induced colitis. *Br J Pharmacol* 2003 May;139(2):209-18
- \*Ung et al: Oral administration of curcumin emulsified in carboxymethyl cellulose has a potent anti-inflammatory effect in the IL-10 gene-deficient mouse model of IBD. *Dig Dis Sci* 2010 May;55(5):1272-7
- \*Venkataranganna et al: NCB-02 (standardized Curcumin preparation) protects dinitrochlorobenzene-induced colitis through down-regulation of NFkappa-B and iNOS. *World J Gastroenterol* 2007 Feb 21;13(7):1103-7
- \*Yadav et al: Novel formulation of solid lipid microparticles of curcumin for anti-angiogenic and anti-inflammatory activity for optimization of therapy of inflammatory bowel disease. *J Pharm Pharmacol* 2009 Mar;61(3):311-21
- \*Yadav et al: Effect of cyclodextrin complexation of curcumin on its solubility and antiangiogenic and anti-inflammatory activity in rat colitis model. *AAPS PharmSciTech* 2009;10(3):752-62
- \*Zhang et al: Curcumin regulated shift from Th1 to Th2 in trinitrobenzene sulphonic acid-induced chronic colitis. *Acta Pharmacol Sin* 2006 Aug;27(8):1071-7
- \*Zhang et al: Curcumin inhibits trinitrobenzene sulphonic acid-induced colitis in rats by activation of peroxisome proliferator-activated receptor gamma. *Int Immunopharmacol* 2006 Aug;6(8):1233-42

**Damiana** is an herb that has significant antacid and anti-ulcer effects.

- \*de Souza Gracioso et al: Effects of tea from *Turnera ulmifolia* L. on mouse gastric mucosa support the Turneraceae as a new source of antiulcerogenic drugs. *Biol Pharm Bull* 2002 Apr;25(4):487-91

**Dandelion, Fennel, Lemonbalm, Marigold (Calendula), St. Johns Wort** are herbs that effectively treat colitis and diarrhea.

- \*Chakürski et al: Treatment of chronic colitis with an herbal combination of *Taraxacum officinale*, *Hipericum perforatum*, *Melissa officinalis*, *Calendula officinalis* and *Foeniculum vulgare*. *Vutr Boles* 1981;20(6):51-4

**Dates** are comparable to lansoprazole in preventing gastric ulcers.

- \*Al-Qarawi et al: The ameliorative effect of dates (*Phoenix dactylifera* L.) on ethanol-induced gastric ulcer in rats. *J Ethnopharmacol* 2005 Apr 26;98(3):313-7

**Diet rich in fruits, vegetables and fiber** significantly decrease digestive disorders including Barrett's esophagus, as well as all types of cancers (see separately), diabetes, and heart disease.

- \*Gramenzi et al: Association between certain foods and risk of acute myocardial infarction in women. *Diabetes Metab Res Rev* 2003 Jan-Feb;19(1):69-75
- \*Kubo et al: Effects of dietary fiber, fats, and meat intakes on the risk of Barrett's esophagus. *Nutr Cancer* 2009;61(5):607-16

**Digestive Enzymes** and/or **Hydrochloric acid (HCl)** at every meal enhances digestion and the immune system.

\*Bohager 2009:65-69

**DGL** (deglycyrrhizinated licorice root) before a meal helps protect the stomach lining especially if there is an ulcer present.

\*Bennett et al: Aspirin-induced gastric mucosal damage in rats: cimetidine and deglycyrrhizinated liquorice together give greater protection than low doses of either drug alone. *J Pharm Pharmacol* 1980 Feb;32(2):151

\*Feldman & Gilat: A trial of deglycyrrhizinated liquorice in the treatment of duodenal ulcer. *Gut* 1971;12:449

\*Johnston & Mclsaac: The effects of deglycyrrhizinated liquorice and cimetidine on resting gastric mucosal blood flow in man. *Br J Pharmacol* 1981;74:971-972

\*Morgan et al: The effect of deglycyrrhizinated liquorice on the occurrence of aspirin and aspirin plus bile acid-induced gastric lesions, and aspirin absorption in rats. *Gastroenterol* 1982;82:1134

\*Rees et al: Effect of deglycyrrhizinated liquorice on gas-tric mucosal damage by aspirin. *Scand J Gastroenterol* 1979;14(5):605-7

\*Russell et al: Studies on the protective effect of deglycyrrhizinated liquorice against aspirin (ASA) and ASA plus bile acid-induced gastric mucosal damage, and ASA absorption in rats. *Scand J Gastroenterol Suppl* 1984;92:97-100

\*van Marle et al: Deglycyrrhizinated liquorice and the renewal of rat stomach epithelium. *Eur J Pharmacol* 1981;72:219-225

**Dong quai** (*Angelica sinensis*), also known as the female ginseng, naturally increases estrogen levels but it also decreases the effects of ulcerative colitis.

\*Wong et al: Protective effect of polysaccharides from *Angelica sinensis* on ulcerative colitis in rats. *Inflammopharma* 2008 Aug;16(4):162-7

\*Ye et al: Effect of polysaccharides from *Angelica sinensis* on gastric ulcer healing. *Rad Res* 2006 May;165(5):546-52

**Ellagic acid**, found in red raspberries, has the same effect as PPIs but without the side effects.

\*Murakami et al: Inhibition of gastric H<sup>+</sup>, K<sup>(+)</sup>-ATPase and acid secretion by ellagic acid. *Mol Nutr Food Res* 2008 Jun;52(6):692-700

**Essential oils** have gastro-protective effects; help to regulate bowel flora; improve digestion; and some are effective in preventing *H. pylori*. They can safely be taken internally by adults or children although infants should be massaged with the oils in a carrier oil instead of giving internally: Caraway, Fennel, Lavender, Lemon, Marjoram, Neroli, Nutmeg, Orange, Oregano, and Peppermint (especially effective).

\*Alexandrovich et al: The effect of fennel (*Foeniculum Vulgare*) seed oil emulsion in infantile colic: a randomized, placebo-controlled study. *Altern Ther Health Med* 2003 Jul-Aug;9(4):58-61

\*Bergonzelli et al: Essential oils as components of a diet-based approach to management of Helicobacter infection. *Antimicrob Agents Chemother* 2003 Oct;47(10):3240-46

\*Cappello et al: Peppermint oil (Mintoil) in the treatment of irritable bowel syndrome: a prospective double blind placebo-controlled randomized trial. *Dig Liver Dis* 2007 Jun;39(6):530-6

\*Freise & Köhler: Peppermint oil-caraway oil fixed combination in non-ulcer dyspepsia--comparison of the effects of enteric preparations. *Pharmazie* 1999 Mar;54(3):210-5

\*Grigoleit & Grigoleit: Peppermint oil in irritable bowel syndrome. *Phytomed* 2005 Aug;12(8):601-6

\*Hawrelak et al: Essential oils in the treatment of intestinal dysbiosis: A preliminary in vitro study. *Altern Med Rev* 2009 Dec;14(4):380-4

- \*Hiki et al: Peppermint oil reduces gastric spasm during upper endoscopy: a randomized, double-blind, double-dummy controlled trial. *Gastrointest Endosc* 2003 Apr;57(4):475-82
- \*Hiki et al: Peppermint oil reduces gastric spasm during upper endoscopy: a randomized, double-blind, double-dummy controlled trial. *J Clin Gastroenterol* 2001 Jul;33(1):27-31
- \*Inamori et al: Early effects of peppermint oil on gastric emptying: a crossover study using a continuous real-time <sup>13</sup>C breath test (BreathID system). *J Gastroenterol* 2007 Jul;42(7):539-42
- \*Kline et al: Enteric-coated, pH-dependent peppermint oil capsules for the treatment of irritable bowel syndrome in children. *J Pediatr* 2001 Jan;138(1):125-8
- \*May et al: Efficacy and tolerability of a fixed combination of peppermint oil and caraway oil in patients suffering from functional dyspepsia. *Aliment Pharmacol Ther* 2000 Dec;14(12):1671-7
- \*Merat et al: The effect of enteric-coated, delayed-release peppermint oil on irritable bowel syndrome. *Dig Dis Sci* 2010 May;55(5):1385-90
- \*Moraes et al: Effects of limonene and essential oil from *Citrus aurantium* on gastric mucosa: role of prostaglandins and gastric mucus secretion. *Chem Biol Interact* 2009 Aug 14;180(3):499-505

**Fish oil, FOS (prebiotic food), Soluble fiber, Gum arabic and Antioxidants** reduce the need for steroids in ulcerative colitis.

- \*Aslan & Triadafilopoulos: Fish oil fatty acid supplementation in active ulcerative colitis: a double-blind, placebo-controlled, crossover study. *Am J Gastroenterol* 1992 Apr;87(4):432-7
- \*Seidner et al: An oral supplement enriched with fish oil, soluble fiber, and antioxidants for corticosteroid sparing in ulcerative colitis: a randomized, controlled trial. *Clin Gastroenterol Hepatol* 2005 Apr;3(4):358-69

**Flavonoids** (bioflavonoids) are the what give fruits and vegetables their colour. They have a wide variety of health benefits include gastro-protective effects.

- \*Odvina: Comparative value of orange juice versus lemonade in reducing stone-forming risk. *Clin J Am Soc Nephrol* 2006 Nov;1(6):1269-74
- \*Zayachkivska et al: Gastroprotective effects of flavonoids in plant extracts. *J Physiol Pharmacol* 2005 Mar;56 Suppl 1:219-31

**Gallstones** (as well as liver and kidney stones) are signs of poor digestion. They can be eliminated using various techniques including Garlic oil or Chanca piedra (Spanish for “stone crusher”).

- \*Moritz: *The Liver and Gallbladder Miracle Cleanse*, Ulysses Press, 2007
- \*Nijhawan et al: Evaluation of garlic oil as a contact dissolution agent for gallstones: comparison with monoctanoin. *Trop Gastroenter* 2000 Oct-Dec;21(4):177-9
- \*Raintree Tropical Plant Database - [www.rain-tree.com/chanca.htm](http://www.rain-tree.com/chanca.htm)

**Ginger** is a valuable herbal root that prohibits ulcer formation, protects the digestive tract from aluminum damage, and is up to eight times more effective than lansoprazole.

- \*Moselhy et al: Role of ginger against the reproductive toxicity of aluminium chloride in albino male rats. *Reprod Domest Anim* 2011 Jul 26
- \*Nanjundaiah et al: Gastroprotective effect of ginger rhizome (*Zingiber officinale*) extract: role of gallic acid and cinnamic acid in H<sup>+</sup>, K<sup>+</sup>-ATPase/H. pylori Inhibition and anti-oxidative mechanism. *Evid Based Compl Alt Med* 2009 Jul 1
- \*Siddaraju & Dharmesh: Inhibition of gastric H<sup>+</sup>, K<sup>+</sup>-ATPase and *Helicobacter pylori* growth by phenolic antioxidants of *Zingiber officinale*. *Mol Nutr Food Res* 2007 Mar;51(3):324-32

**Ginkgo biloba** is an herb often used to improve memory (mainly because it improves circulation). It also has anti-inflammatory effects that help reduce colitis symptoms.

- \*Kotakadi et al: Ginkgo biloba extract EGb 761 has anti-inflammatory properties and ameliorates colitis in mice by driving effector T cell apoptosis. *Carcinogen* 2008 Sep;29(9):1799-806

**Glucosamine** is an essential sugar required by many cells in the body for proper functioning. It is effective for decreasing the effects of such autoimmune disorders as inflammatory bowel diseases and arthritis.

- \*Russell: Glycoaminoglycan (GAG) deficiency in protective barrier as an underlying, primary cause of ulcerative colitis, Crohn's disease interstitial cystitis and possibly Reiter's syndrome. *Med Hypoth* 1999 Apr;52(4):297-301
- \*www.innvista.com/health/nutrition/sugars/glucosamine.htm
- \*Yomagida et al: Glucosamine, a naturally occurring amino monosaccharide, suppresses dextran sulfate sodium-induced colitis in rats. *Int J Mol Med* 2008 Sep;22(3):317-23

**Glutamine** is a non-essential amino acid that plays a role in gut-healing, especially after a bowel resection or in premature infants. Along with Arginine (another amino acid), Honey or Curcumin, Glutamine's effects are increased.

- \*Basivireddy et al: Oral glutamine attenuates indomethacin-induced small intestinal damage. *Clin Sci (Lond)* 2004 Sep;107(3):281-9
- \*Eyarefe et al: Small bowel responses to enteral honey and glutamine administration following massive small bowel resection in rabbit. *Afr J Med Med Sci* 2008 Dec;37(4):309-14
- \*Kul et al: Enteral glutamine and/or arginine supplementation have favorable effects on oxidative stress parameters in neonatal rat intestine. *J Pediatr Gastroenterol Nutr* 2009 Jul;49(1):85-9
- \*Ohno et al: Glutamine decreases the duration of postoperative ileus after abdominal surgery: an experimental study of conscious dogs. *Dig Dis Sci* 2009 Jun;54(6):1208-13
- \*Rapin & Wiernsperger: Possible links between intestinal permeability and food processing: A potential therapeutic niche for glutamine. *Clinics (Sao Paulo)* 2010 Jun;65(6):635-43
- \*Roth: Nonnutritive effects of glutamine. *J Nutr* 2008 Oct;138(10):2025S-2031S
- \*Zhou et al: Glutamine enhances the gut-trophic effect of growth hormone in rat after massive small bowel resection. *Arch Dermatol Res* 1986;278(6):433-6

**Goldenseal** and **Bloodroot** are herbs that inhibit the H. pylori bacteria, often the cause of stomach ulcers.

- \*Mahady et al: In vitro susceptibility of Helicobacter pylori to isoquinoline alkaloids from Sanguinaria canadensis and Hydrastis canadensis. *J Med Food* 2007 Dec;10(4):694-701

**Grapes** protect against the H. pylori bacterium. Buy only **organic grapes** as they are #7 on the list of foods that are highest in pesticides, which are known carcinogens.

- \*Martini et al: Antibacterial activity of grape extracts on cagA-positive and -negative Helicobacter pylori clinical isolates. *J Chemother* 2009 Nov;21(5):507-13
- \*The Full List: 53 Fruits and Veggies. Environmental Working Group. [www.ewg.org/foodnews/list/](http://www.ewg.org/foodnews/list/)

**Hawthorn** is an herb often used to strengthen the heart muscle but it also has other multi-beneficial effects including gastro-protective.

- \*Tadić et al: Anti-inflammatory, gastroprotective, free-radical-scavenging, and antimicrobial activities of hawthorn berries ethanol extract. *J Agric Food Chem* 2008 Sep 10;56(17):7700-9

**Homeopathic treatment** in areas of anxiety, depression, and irritable bowel proves to be more than 75% positive.

- \*Mathie & Robinson: Outcomes from homeopathic prescribing in medical practice: a prospective, research-targeted, pilot study. *Homeopathy* 2006;95:199-205

**Honey** (non-pasteurized or Manuka), **Olive oil**, and **Beeswax** is a safe and effective combination to use on painful hemorrhoids or anal fissures that often develop after prolonged digestive problems. **Manuka honey** is an effective rehydration additive for infants and children after a bout of gastroenteritis; lessens inflammatory bowel

diseases; and helps overcome stomach ulcers caused by *H. Pylori* (warning: it will also feed *Candida* yeast that often accompanies *H. pylori*). Use only unpasteurized or Manuka honey as the average “grocery store honey” is not real honey and therefore, not medicinally effective.

- \*Abdulrhman et al: Bee honey added to the oral rehydration solution in treatment of gastroenteritis in infants and children. *J Med Food* 2010 Jun;13(3):605-9
- \*Al-Waili et al: The safety and efficacy of a mixture of honey, olive oil, and beeswax for the management of hemorrhoids and anal fissure: a pilot study. *Sci World J* 2006 Feb 2;6:1998-2005
- \*Medhi et al: Effect of Manuka honey and sulfasalazine in combination to promote antioxidant defense system in experimentally induced ulcerative colitis model in rats. *Indian J Exp Biol* 2008 Aug;46(8):583-90
- \*Prakash et al: Effect of different doses of Manuka honey in experimentally induced inflammatory bowel disease in rats. *Phytother Res* 2008 Aug 7
- \*Schneider: Tests Show Most Store Honey Isn't Honey: Ultra-filtering Removes Pollen, Hides Honey Origins. *Food Safety News* 2011 Nov 7
- \*Somal et al: Susceptibility of *Helicobacter pylori* to the antibacterial activity of manuka honey. *J R Soc Med* 1994 Jan;87(1):9-12

### **Indian Oyster Mushroom** reduces colitis inflammation.

- \*Lavi et al: Orally administered glucans from the edible mushroom *Pleurotus pulmonarius* reduce acute inflammation in dextran sulfate sodium-induced experimental colitis. *Br J Nutr* 2009 Sep 22:1-10

**Iron supplements** are often necessary but can aggravate colitis. **Vitamin E** can lessen these effects but iron supplements should always be taken with food. Some forms are easier to absorb than others but which ones depends on the person. Ferrous fumarate is a form often prescribed and very difficult to absorb with most causing constipation. Because of poor absorption, iron deficiency anemia is common in those with celiac disease, *H. pylori* and GERD.

- \*Carrier et al: Iron supplementation increases disease activity and vitamin E ameliorates the effect in rats with dextran sulfate sodium-induced colitis. *J Nutr* 2002 Oct;132(10):3146-50
- \*Erichsen et al: Low-dose oral ferrous fumarate aggravated intestinal inflammation in rats with DSS-induced colitis. *Inflamm Bowel Dis* 2005 Aug;11(8):744-8
- \*Fayed et al: Prevalence of celiac disease, *Helicobacter pylori* and gastroesophageal reflux in patients with refractory iron deficiency anemia. *J Trop Pediatr* 2008 Feb;54(1):43-53

### **Japanese apricots** lessen the effects of ulcerative colitis and help heal stomach lesions caused by *H. pylori*.

- \*Otsuka et al: Suppressive effects of fruit-juice concentrate of *Prunus mume* Sieb. et Zucc. (Japanese apricot, Ume) on *Helicobacter pylori*-induced glandular stomach lesions in Mongolian gerbils. *Asian Pac J Cancer Prev* 2005 Jul-Sep;6(3):337-41
- \*Singh et al: Exploring the ameliorative potential of *Punica granatum* in dextran sulfate sodium induced ulcerative colitis in mice. *Phytother Res* 2009 Apr 15

### **Magnesium deficiency** can cause seizures in those taking PPIs for a long time.

- \*Cundy & Dissanayake: Severe hypomagnesaemia in long-term users of proton-pump inhibitors. *Clin Endocrinol (Oxf)* 2008 Aug;69(2):338-41

### **Mango flowers and leaves** protect the gastric system and help heal ulcers.

- \*Lima et al: Can the aqueous decoction of mango flowers be used as an antiulcer agent? *Planta Med* 2004 Aug;70(8):745-52
- \*Severi et al: Polyphenols with antiulcerogenic action from aqueous decoction of mango leaves (*Mangifera indica* L.). *Molecul* 2009;14(3):1098-110

**Mangosteen** is a fruit with numerous health benefits including anti-inflammatory and analgesic (pain-relieving) action.

- \*Cui et al: New medicinal properties of mangostins: analgesic activity and pharmacological characterization of active ingredients from the fruit hull of *Garcinia mangostana* L. *Anticancer Res* 1998 Sep-Oct;18(5A):3487-91

**Melatonin** not only can be used to induce sleep but provides a safe and effective alternative to PPIs; improves symptoms of colitis and GERD (gastroesophageal reflux disease); reduces aging effects in the digestive tract; and decreases gallbladder inflammation.

- \*Akbulut et al: Melatonin decreases apoptosis in gastric mucosa during aging. *Aging Clin Exp Res* 2011 Mar 14
- \*Kandil et al: The potential therapeutic effect of melatonin in Gastro-Esophageal Reflux Disease. *BMC Gastroenterol* 2010;10:7
- \*Koppiseti et al: Reactive oxygen species and the hypomotility of the gall bladder as targets for the treatment of gallstones with melatonin: a review. *Dig Dis Sci* 2008 Oct;53(10):2592-603
- \*Mazzon et al: Melatonin modulates signal transduction pathways and apoptosis in experimental colitis. *J Pineal Res* 2006 Nov;41(4):363-73
- \*Werbach: Melatonin for the treatment of gastroesophageal reflux disease. *Altern Ther Health Med* 2008 Jul-Aug;14(4):54-8

**Melatonin and Curcumin** protect against the development of medication-induced gastric ulcers.

- \*Ganguly et al: Hydrogen peroxide-mediated downregulation of matrix metalloprotease-2 in indomethacin-induced acute gastric ulceration is blocked by melatonin and other antioxidants. *Free Radic Biol Med* 2006 Sep 15;41(6):911-25

**MSM** (methylsulfonylmethane) is a non-odorous sulfur compound and metabolite of DMSO. Derived from either wood pulp or fossil fuels, it is nearly impossible to determine which supplement comes from which source. However, it appears to have anti-inflammatory effects for colitis and osteoarthritis.

- \*Amirshahrokhi et al: The effect of methylsulfonylmethane on the experimental colitis in the rat. *Toxicol Appl Pharmacol* 2011 Jun 15;253(3):197-202

**Neem** is an herb with natural anti-microbial properties and therefore useful in preventing bacteria-caused ulcers as well as having other gastro-protective effects.

- \*Bandyopadhyay et al: Clinical studies on the effect of Neem (*Azadirachta indica*) bark extract on gastric secretion and gastroduodenal ulcer. *Life Sci* 2004 Oct 29;75(24):2867-78
- \*Dorababu et al: Effect of aqueous extract of neem (*Azadirachta indica*) leaves on offensive and defensive gastric mucosal factors in rats. *Indian J Physiol Pharmacol* 2006 Jul-Sep;50(3):241-9

**Noni fruit** controls nausea and vomiting after surgery. It also decreases symptoms of reflux esophagitis and gastric ulcers.

- \*Mahattanadul et al: Effects of *Morinda citrifolia* aqueous fruit extract and its biomarker scopoletin on reflux esophagitis and gastric ulcer in rats. *J Ethnopharmacol* 2011 Mar 24 ;134(2):243-50
- \*Prapaitrakool & Itharat: *Morinda citrifolia* Linn. for prevention of postoperative nausea and vomiting. *J Med Assoc Thai* 2010 Dec;93 Suppl 7:S204-9

**Olive leaves** (yes, from the olive tree) have numerous health benefits including preventing the development of non-alcoholic fatty liver.

- \*Omagari et al: Olive leaf extract prevents spontaneous occurrence of non-alcoholic steatohepatitis in SHR/NDmcr-cp rats. *Pathol* 2010 Jan;42(1):66-72

**Orange or Lemon juice** helps reduce the formation of kidney stones better than potassium citrate. Stones are often a sign of poor digestion and made worse by antacids.

- \*Aras et al: Can lemon juice be an alternative to potassium citrate in the treatment of urinary calcium stones in patients with hypocitraturia? A prospective randomized study. *Urol Res* 2008 Dec;36(6):313-7
- \*Kang et al: Long-term lemonade based dietary manipulation in patients with hypocitraturic nephrolithiasis. *J Urol* 2007 Apr;177(4):1358-62;disc 1362; quiz 1591
- \*Odvina et al: Comparative value of orange juice versus lemonade in reducing stone-forming risk. *Clin J Am Soc Nephrol* 2006 Nov;1(6):1269-74

**Papaya fruit (unripened)** has beneficial effects on gastric ulcers. It is able to detoxify gliadin, a protein found in wheat that an increasing number of people are unable to digest.

- \*Cornell et al: Papaya latex enzymes capable of detoxification of gliadin. *Amino Acids* 2009 Jan 21
- \*Ezike et al: Carica papaya (Paw-Paw) unripe fruit may be beneficial in ulcer. *Int J Oncol* 2004 Dec;25(6):1809-15

**Papaya leaf extract** protects the gastric system and has antioxidant effects similar to vitamin E.

- \*Protective effect of Carica papaya L leaf extract against alcohol induced acute gastric damage and blood oxidative stress in rats. *West Indian Med J* 2008 Sep;57(4):323-6
- \*Mehdipour et al: Antioxidant potentials of Iranian Carica papaya juice in vitro and in vivo are comparable to alpha-tocopherol. *Phytother Res* 2006 Jul;20(7):591-4

**Pectin liquid** helps overcome GERD in children with cerebral palsy.

- \*Miyazawa et al: Effects of pectin liquid on gastroesophageal reflux disease in children with cerebral palsy. *BMC Gastroenterol* 2008 Apr 16;8:11

**Peppermint oil** eases irritable bowel symptoms.

- \*Cappello et al: Peppermint oil (Mintoil) in the treatment of irritable bowel syndrome: a prospective double blind placebo-controlled randomized trial. *Dig Liver Dis.* 2007 Jun;39(6):530-6
- \*Freise and Köhler: Peppermint oil-caraway oil fixed combination in non-ulcer dyspepsia--comparison of the effects of enteric preparations. *Pharmazie* 1999 Mar;54(3):210-5
- \*Grigoleit and Grigoleit: Peppermint oil in irritable bowel syndrome. *Phytomed* 2005 Aug;12(8):601-6
- \*Kline et al: Enteric-coated, pH-dependent peppermint oil capsules for the treatment of irritable bowel syndrome in children. *J Pediatr* 2001 Jan;138(1):125-8
- \*Liu et al: Enteric-coated peppermint-oil capsules in the treatment of irritable bowel syndrome: a prospective, randomized trial. *J Gastroenterol* 1997 Dec;32(6):765-8
- \*May et al: Efficacy and tolerability of a fixed combination of peppermint oil and caraway oil in patients suffering from functional dyspepsia. *Aliment Pharmacol Ther* 2000 Dec;14(12):1671-7
- \*Merat et al: The effect of enteric-coated, delayed-release peppermint oil on irritable bowel syndrome. *Dig Dis Sci* 2010 May;55(5):1385-90

**Pineapple juice (fresh)** has natural enzymes that decrease inflammatory bowel symptoms.

- \*Hale et al: Dietary supplementation with fresh and colonic neoplasia in IL-10-deficient mice with colitis. *Inflamm Bowel Dis* 2010 Dec;16(12):2012-21

**Pomegranates** are fruits that protect the digestive tract from alcohol and aspirin-induced damage and prevents the kidneys from forming stones. Pomegranates also increase good bacteria (probiotics) which are vital for good digestion and the immune system.

- \*Ajaikumar et al: The inhibition of gastric mucosal injury by Punicagranatum L. (pomegranate) methanolic extract. *J Ethnopharmacol* 2005 Jan 4;96(1-2):171-6

- \*Bialonska et al: The effect of pomegranate (*Punica granatum* L.) byproducts and ellagitannins on the growth of human gut bacteria. *J Agric Food Chem* 2009 Sep 23;57(18):8344-9
- \*Singh et al: Exploring the ameliorative potential of *Punica granatum* in dextran sulfate sodium induced ulcerative colitis in mice. *Phytother Res* 2009 Apr 15
- \*Tugcu et al: Protective effect of a potent antioxidant, pomegranate juice, in the kidney of rats with nephrolithiasis induced by ethylene glycol. *Bone* 2010 Nov;47(5):926-37

**Probiotics** improve digestion and inflammatory bowel conditions in adults and infants; strengthen the immune system in adults and infants; play an important role in the prevention of superbugs and various autoimmune disorders; are more effective and safer than simethicone for colicky babies.

- \*Chermesh I, Eliakim R. Probiotics and the gastrointestinal tract: where are we in 2005? *World J Gastroenterol* 2006;12:853-57
- \*Duff: Probiotics at a Glance - [www.innvista.com/health/nutrients/probiotics/default.htm](http://www.innvista.com/health/nutrients/probiotics/default.htm)
- \*Eren et al: Clinical efficacy comparison of *Saccharomyces boulardii* and yogurt fluid in acute non-bloody diarrhea in children: a randomized, controlled, open label study. *Am J Trop Med Hyg* 2010 Mar;82(3):488-91
- \*Forchielli & Walker: The role of gut-associated lymphoid tissues and mucosal defence. *Br J Nutr* 2005;93(Supp 1):S41-8
- \*Gotteland et al: Systematic review: are probiotics useful in controlling gastric colonization by *Helicobacter pylori*? *Aliment Pharmacol Ther* 2006;23:1077-86
- \*Guyonnet et al: Effect of a fermented milk containing *Bifidobacterium animalis* DN-173 010 on the health-related quality of life and symptoms in irritable bowel syndrome in adults in primary care: a multicentre, randomized, double-blind, controlled trial. *Aliment Pharmacol Ther.* 2007 Aug 1;26(3):475-86
- \*Hajela et al: Are probiotics a feasible intervention for prevention of diarrhoea in the developing world? *Gut Pathog* 2010;2(1):10
- \*Heydari et al: A comparison between traditional yogurt and probiotic yogurt in non-inflammatory acute gastroenteritis. *Saudi Med J* 2010 Mar;31(3):280-3
- \*Heyman: Effect of lactic acid bacteria on diarrheal diseases. *J Am Coll Nutr* 2000;19:137S-46S
- \*Hun: *Bacillus coagulans* significantly improved abdominal pain and bloating in patients with IBS. *Postgrad Med* 2009 Mar;121(2):119-24
- \*Indrio et al: *Lactobacillus reuteri* accelerates gastric emptying and improves regurgitation in infants. *Eur J Clin Invest* 2011 Apr;41(4):417-22
- \*Johnson-Henry et al: Probiotics reduce bacterial colonization and gastric inflammation in *H. pylori*-infected mice. *Dig Dis Sci* 2004;49:1095-102
- \*Ki et al: In vitro inhibition of *Helicobacter pylori* growth and of adherence of *cagA*-positive strains to gastric epithelial cells by *Lactobacillus paraplantarum* KNUC25 isolated from kimchi. *J Med Food* 2010 Jun;13(3):629-34
- \*Konieczna et al: *Bifidobacterium infantis* 35624 administration induces Foxp3 T regulatory cells in human peripheral blood: potential role for myeloid and plasmacytoid dendritic cells. *Gut* 2012 Mar;61(3):354-66
- \*Kukkonen et al: Long-term safety and impact on infection rates of postnatal probiotic and prebiotic (synbiotic) treatment: randomized, double-blind, placebo-controlled trial. *Pediatrics* 2008;122(1):8-12
- \*Lee et al: The effect of *Saccharomyces boulardii* on human colon cells and inflammation in rats with trinitrobenzene sulfonic acid-induced colitis. *Dig Dis Sci* 2008 Jul 10
- \*Mennigen & Bruewer: Effect of probiotics on intestinal barrier function. *Ann N Y Acad Sci* 2009 May;1165:183-9
- \*Mohamadzadeh & Owen: Reprogramming intestinal immunity is the answer to induced pathogenic inflammation. *Immunother* 2011 Dec;3(12):1415-7
- \*Oelschlaeger: Mechanisms of probiotic actions - A review. *Int J Med Microbiol* 2010;300(1):57-62
- \*Ogawa et al: Protective effect of *Lactobacillus casei* strain Shirota on Shiga toxin-producing *Escherichia coli* O157:H7 infection in infant rabbits. *Infect Immun* 2001;69:1101-8

- \*Pascual et al: Lactobacillus salivarius CTC2197 prevents Salmonella enteritidis colonization in chickens. Appl Environ Microbiol 1999;65:4981-6
- \*Paton et al: Designer probiotics for prevention of enteric infections. Nat Rev Microbiol 2006;4:193-200
- \*Paton et al: Recombinant probiotics for treatment and prevention of enterotoxigenic Escherichia coli diarrhea. Gastroentero 2005;128:1219-28
- \*Pina et al: Improvement of intestinal function in cystic fibrosis patients using probiotics. An Pediatr (Barc) 2008 Dec;69(6):501-5
- \*Resta-Lenert & Barrett: Modulation of intestinal barrier properties by probiotics: role in reversing colitis. Ann N Y Acad Sci 2009 May;1165:175-82
- \*Sahin et al: Effects of the probiotic agent Saccharomyces Boulardii on the DNA damage in acute necrotizing pancreatitis induced rats. Hum Exp Toxicol 2007 Aug;26(8):653-61
- \*Savino et al: Lactobacillus reuteri (American Type Culture Collection Strain 55730) versus simethicone in the treatment of infantile colic: a prospective randomized study. Pediatrics 2007 Jan;119(1):e124-30
- \*Sheehan et al: Improving gastric transit, gastrointestinal persistence and therapeutic efficacy of the probiotic strain Bifidobacterium breve UCC2003. Microbiol 2007;153:3563-71
- \*Shornikova et al: Bacteriotherapy with Lactobacillus reuteri in rotavirus gastroenteritis. Pediatr Infect Dis J 1997;16:1103-7
- \*Solis et al: Probiotics as a help in children suffering from malnutrition and diarrhoea. Eur J Clin Nutr 2002;56(Suppl 3):S57-9
- \*Tursi et al: Mesalazine and/or Lactobacillus casei in maintaining long-term remission of symptomatic uncomplicated diverticular disease of the colon. Hepatogastroentero 2008 May-Jun;55(84):916-20
- \*Uchida et al: Yogurt containing Lactobacillus gasseri OLL 2716 (LG21 yogurt) accelerated the healing of acetic acid-induced gastric ulcer in rats. Biosci Biotechnol Biochem 2010 Sep 23;74(9):1891-4
- \*Van Niel et al: Lactobacillus therapy for acute infectious diarrhea in children: a meta-analysis. Pediatrics 2002;109:678-84
- \*Vilela et al: Influence of Saccharomyces boulardii on the intestinal permeability of patients with Crohn's disease in remission. Scand J Gastroenterol 2008;43(7):842-8
- \*Wu & Vallance: Saccharomyces boulardii ameliorates Citrobacter rodentium-induced colitis through actions on bacterial virulence factors. Am J Physiol Gastrointest Liver Physiol 2008 Jan;294(1):G295-306
- \*Wullt et al: Lactobacillus plantarum 299v enhances the concentrations of fecal short-chain fatty acids in patients with recurrent clostridium difficile-associated diarrhea. Dig Dis Sci 2007 Sep;52(9):2082-6

**Psyllium** is a soluble fiber that often helps to correct digestive disorders and proves to be as effective as mesalamine (an anti-inflammatory drug) for treating ulcerative colitis.

- \*Bijkerk et al: Soluble or insoluble fibre in irritable bowel syndrome in primary care? Randomised placebo controlled trial. BMJ 2009 Aug 27;339:b3154
- \*Fernández-Bañares et al: Randomized clinical trial of Plantago ovata seeds (dietary fiber) as compared with mesalamine in maintaining remission in ulcerative colitis. Spanish Group for the Study of Crohn's Disease and Ulcerative Colitis (GETECCU). Am J Gastroenterol 1999 Feb;94(2):427-33
- \*Karhunen et al: A psyllium fiber-enriched meal strongly attenuates postprandial gastrointestinal peptide release in healthy young adults. J Nutr 2010 Apr;140(4):737-44
- \*Rodríguez-Cabezas et al: Dietary fiber down-regulates colonic tumor necrosis factor alpha and nitric oxide production in trinitrobenzenesulfonic acid-induced colitic rats. J Nutr 2002 Nov;132(11):3263-71

**Psyllium, Mint, Coriander, and Lemonbalm** are all effective for treating IBS (irritable bowel syndrome).

- \*Vejdani et al: The efficacy of an herbal medicine, Carmint, on the relief of abdominal pain and bloating in patients with irritable bowel syndrome: a pilot study. Dig Dis Sci 2006 Aug;51(8):1501-7

**Quercetin** and **Vitamin E** dramatically reduce the severity of esophageal reflux and without damage to the gastrointestinal tract.

\*Murakami et al: Inhibition of gastric H<sup>+</sup>, K(+) -ATPase by quercetin. J Enzyme Inhib 1992;5(4):293-8

\*Venkateswara & Vijayakumar: Effect of quercetin, flavonoids and alpha-tocopherol, an antioxidant vitamin, on experimental reflux oesophagitis in rats. J Agric Food Chem 2005 Dec 28;53(26):10306-9

**Red Yeast Rice** is usually given to lower cholesterol levels but it can also increase bile acid excretion which helps digestion.

\*Ma et al: Red yeast rice increases excretion of bile acids in hamsters. Biomed Environ Sci 2009 Aug;22(4):269-77

**Reishi mushrooms** speed the healing of acid-induced ulcers.

\*Gao et al: Ganoderma lucidum polysaccharide fractions accelerate healing of acetic acid-induced ulcers in rats. J Med Food 2004 Winter;7(4):417-21

**Resveratrol** and **Piceatannol** (a metabolite of Resveratrol) are powerful antioxidants that prevent colitis and reduce the risk of colon cancer often associated with severe and prolonged colitis.

\*Cui et al: Resveratrol suppresses colitis and colon cancer associated with colitis. Cancer Prev Res (Phila) 2010 Apr;3(4):549-59

\*Sánchez-Fidalgo et al: Dietary supplementation of resveratrol attenuates chronic colonic inflammation in mice. Asia Pac J Clin Nutr 2010;19(1):142-50

\*Singh et al: Resveratrol (trans-3,5,4'-trihydroxystilbene) induces silent mating type information regulation-1 and down-regulates nuclear transcription factor-kappaB activation to abrogate dextran sulfate sodium-induced colitis. J Pharmacol Exp Ther 2010 Mar;332(3):829-39

\*Yao et al: Anti-oxidant effects of resveratrol on mice with DSS-induced ulcerative colitis. Arch Med Res 2010 May;41(4):288-94

\*Youn et al: Resveratrol and piceatannol inhibit iNOS expression and NF-kappaB activation in dextran sulfate sodium-induced mouse colitis. Nutr Cancer 2009;61(6):847-54

**Rooibos Tea** is native to South Africa and used for centuries to relieve spasms and help calm a hyperactive gastrointestinal tract. It is safe even for babies.

\*Gilani et al: Antispasmodic effects of Rooibos tea (*Aspalathus linearis*) is mediated predominantly through K<sup>+</sup> -channel activation. Basic Clin Pharmacol Toxicol 2006 Nov;99(5):365-73

**Sage** and **Red Sage** have the same effects as PPIs but without the side effects and should not be taken with other PPIs.

\*Mayer et al: Gastroprotective constituents of *Salvia officinalis* L. Fitoterapia. 2009 Oct;80(7):421-6

\*Murakami et al: Effect of salvianolic acid A, a depside from roots of *Salvia miltiorrhiza*, on gastric H<sup>+</sup>,K(+) -ATPase. Planta Med 1990 Aug;56(4):360-3

**Slippery elm bark** is soothing to the digestive tract.

\*Natural Medicines Comprehensive Database

\*University of Maryland Medical Centre [www.umm.edu/altmed/articles/slippery-elm-000274.htm]

**Spices** improve the intestinal villi quality which is vital for proper nutrient absorption. Spices tested included black and red peppers and ginger.

\*Prakash & Srinivasan: Beneficial influence of dietary spices on the ultrastructure and fluidity of the intestinal brush border in rats. Br J Nutr 2010 Feb 24;113:1-9

**Spirulina** is a blue-green algae derived from aquatic cyanobacteria, *Arthrospira platensis* (Africa, Asia, South America), *Arthrospira pacifica* (Hawaiian Islands) or *Arthrospira maxima* (Central America). It has long been used for its many health benefits including the prevention and healing of bowel inflammations. One reason may be its **Selenium** and **B12** content which are deficient in those with colitis.

- \*Bogatov: Selenium deficiency and its dietary correction in patients with irritable bowel syndrome and chronic catarrhal colitis. *Vopr Pitan* 2007;76(3):35-9
- \*Coskun et al: The study of biochemical and histopathological effects of spirulina in rats with TNBS-induced colitis. *Bratisl Lek Listy* 2011;112(5):235-43
- \*Kumudha et al: Purification, identification, and characterization of methylcobalamin from *Spirulina platensis*. *J Agric Food Chem* 2010 Sep 22;58(18):9925-30

**Sprouted Barley** improves inflammatory bowel conditions. When grains, seeds and legumes are sprouted (germinated), the effect improves the availability of nutrients, sometimes increasing their nutrient content. The process also improves the digestion of the fiber which makes a good food source for probiotics and called prebiotics.

- \*Araki et al: Germinated barley foodstuff suppresses dextran sulfate experimental colitis in rats: the role of mast cells. *Int J Mol Med* 2007 Feb;19(2):257-62
- \*Hanai et al: Germinated barley foodstuff prolongs remission in patients with ulcerative colitis. *Int J Mol Med* 2004 May;13(5):643-7
- \*Kanauchi et al: Treatment of ulcerative colitis by feeding with germinated barley foodstuff: first report of a multicenter open control trial. *J Gastroenterol* 2002 Nov;37 Suppl 14:67-72

**Steam cooking** improves the bile acid-binding effects of foods.

- \*Kahlon et al: Steam cooking significantly improves in vitro bile acid binding of collard greens, kale, mustard greens, broccoli, green bell pepper, and cabbage. *Nutr Res* 2008 Jun;28(6):351-7

**Teas (herbal)** after a meal help digestion of adults and improves infantile colic. Drops of Essential oils can also be put into hot water and taken as a tea: Fenugreek, Fennel, Ginger, Melissa, Peppermint are the most effective either as an herbal tea or an essential oil.

- \*Ghayur & Gilani: Pharmacological basis for the medicinal use of ginger in gastrointestinal disorders. *Dig Dis Sci* 2005 Oct;50(10):1889-97
- \*Hu et al: Effect of ginger on gastric motility and symptoms of functional dyspepsia. *World J Gastroenterol* 2011 Jan 7;17(1):105-10
- \*Nanjundiah et al: Gastroprotective Effect of Ginger Rhizome (*Zingiber officinale*) Extract: Role of Gallic Acid and Cinnamic Acid in H<sup>+</sup>, K<sup>+</sup>-ATPase/H. pylori Inhibition and Anti-oxidative Mechanism. *Evid Based Complement Alternat Med* 2009 Jul 1
- \*No authors listed: Herbal remedies for dyspepsia: peppermint seems effective. *Prescrire Int* 2008 Jun;17(95):121-3
- \*Prakash & Srinivasan: Beneficial influence of dietary spices on the ultrastructure and fluidity of the intestinal brush border in rats. *Br J Nutr* 2010 Feb 24:1-9
- \*Savino et al: A randomized double-blind placebo-controlled trial of a standardized extract of *Matricaria recutita*, *Foeniculum vulgare* and *Melissa officinalis* (ColiMil) in the treatment of breastfed colicky infants. *Phytother Res* 2005 Apr;19(4):335-40
- \*Yamahara et al: The anti-ulcer effect in rats of ginger constituents. *Med Hypoth* 2009 Sep;73(3):306-8
- \*Yamahara et al: The anti-ulcer effect in rats of ginger constituents. *J Ethnopharmacol* 1988 Jul-Aug;23(2-3):299-304

**Water** safely and effectively reduces stomach acids without the use of medications. It is best to drink filtered water and not tap water.

- \*Karamanolis et al: A glass of water immediately increases gastric pH in healthy subjects. *Dig Dis Sci* 2008 Dec;53(12):3128-32

**Wheatgrass juice** is an effective treatment for ulcerative colitis.

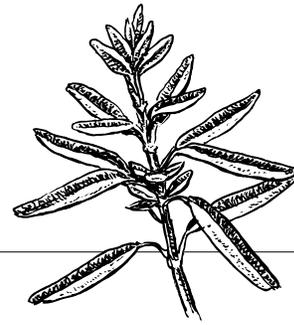
- \*Ben-Arye et al: Wheat grass juice in the treatment of active distal ulcerative colitis: a randomized double-blind placebo-controlled trial. *Scand J Gastroenterol* 2002 Apr;37(4):444-9

**Yacón root** is native to the Andes mountains and showing promise in several health areas. Its prebiotic properties have beneficial effects in treating colitis by stimulating the growth of the protiotic *Lactobacillus* and *Bifidobacterium* strains.

\*Alvarez et al: Prebiotic inulin/oligofructose in Yacón root (*Smallanthus sonchifolius*), phytochemistry and standardization as basis for clinical and pre-clinical research. *Rev Gastroenterol Peru* 2008 Jan-Mar;28(1):22-7

# ACNE

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## COMMON EXAMPLES:

**retinoids** (retinoids)

adapalene [Differin]

isotretinoin [Accutane]

tazarotene [Tazorac, Avage, Zorac]

tretinoin [Retin-A, Vesanoid]

**steroid creams, lotions, ointments** (see even more Depletions from that list)

**Antibiotics** are often prescribed (see even more Depletions from that list)

**... and others**

## DEplete:

**A, E, zinc** (the very nutrients needed to improve skin conditions)

## SUGGESTED ALTERNATIVES:

### AVOID!

☞ **Dairy** (there are over 60 hormones in dairy including raw, organic milk) and watch the sugar/carbohydrate/fat intake

\*Acne: Are Milk and Sugar the Causes? By Mark Hyman, MD, online article in the Huffington Post

\*Adebamowo et al: Milk consumption and acne in teenaged boys. J Am Acad Dermatol 2008 May;58(5):787-93

\*Adebamowo et al: Milk consumption and acne in adolescent girls. Dermatol Online J 2006;12(4):1

\*Adebamowo et al: High school dietary dairy intake and teenage acne. J Am Acad Dermatol 2005, Feb;52(2):207-214

\*James et al: Dietary polyunsaturated fatty acids and inflammatory mediator production. Am J Clin Nutr 2000 Jan;71(1 Suppl):343S-8S

\*Kaymak et al: Dietary glycemic index and glucose, insulin, insulin-like growth factor-I, insulin-like growth factor binding protein 3, and leptin levels in patients with acne. J Am Acad Dermatol 2007 Nov;57(5):819-23

\*Melnik et al: Evidence for acne-promoting effects of milk and other insulinotropic dairy products. Nestle Nutr Workshop Ser Pediatr Program 2011 ;67:131-45

\*Smith et al: The effect of a low glycemic load diet on acne vulgaris and the fatty acid composition of skin surface triglycerides. J Dermatol Sci 2008 Jul;50(1):41-52

\*Smith et al: The effect of a high-protein, low glycemic-load diet versus a conventional, high glycemic-load diet on biochemical parameters associated with acne vulgaris: a randomized, investigator-masked, controlled trial. J Am Acad Dermatol 2007 Aug;57(2):247-56

\*Smith et al: A low-glycemic-load diet improves symptoms in acne vulgaris patients: a randomized controlled trial. *Am J Clin Nutr* 2007 Jul;86(1):107-15

### ☞ **Fast food**

\*Litt: McDonald's Acne. *Arch Dermatol* 1974;110(6):956

### ☞ **Chocolate (high fat content)**

\*Fulton et al: Effect of Chocolate on Acne Vulgaris. *JAMA* 1969;210(11):2071-2074

\*Mackie and Mackie: Chocolate and Acne. *Australasian J Derma* 1974 Dec;15(3):103-109

**Alternative and Complementary medicine** is preferable to acne-sufferers than conventional medicine.

\*Magin et al: Complementary and alternative medicine therapies in acne, psoriasis, and atopic eczema: results of a qualitative study of patients' experiences and perceptions. *J Altern Complement Med* 2006;12:451-7

**Antioxidants** reduce acne and skin aging. Acne can appear at any age as a result of hormonal changes, poor diet, or stress. Antioxidants improve skin conditions of all age groups and include vitamins E and C, CoQ10, alpha-lipoic acid, glutathione, and others. A diet containing plenty of fresh fruits and vegetables, fermented soy products, goji berries, flaxseed and borage oils, aloe vera, and pomegranates have proven to be important along with exercise.

\*Bouroshaki et al: Protective effect of pomegranate seed oil on hexachlorobutadiene-induced nephrotoxicity in rat kidneys. *Ren Fail* 2010 Jun;32(5):612-7

\*Cho et al: Dietary aloe vera supplementation improves facial wrinkles and elasticity and it increases the type I procollagen gene expression in human skin in vivo. *Ann Dermatol* 2009 Feb;21(1):6-11

\*Lacroix et al: Supplementation with a complex of active nutrients improved dermal and epidermal characteristics in skin equivalents generated from fibroblasts from young or aged donors. *Gastroenterol Hepatol* 1997 Apr;20(4):172-4

\*Neukam et al: Supplementation of flaxseed oil diminishes skin sensitivity and improves skin barrier function and condition. *Skin Pharmacol Physiol* 2010 Nov 18;24(2):67-74

\*Puizina-Ivić: Skin aging. *Acta Dermatovenerol Alp Panonica Adriat* 2008 Jun;17(2):47-54

\*Reeve et al: Mice drinking goji berry juice (*Lycium barbarum*) are protected from UV radiation-induced skin damage via antioxidant pathways. *Photochem Photobiol Sci* 2010;9:601-607

\*Spirt et al: Intervention with flaxseed and borage oil supplements modulates skin condition in women. *Br J Nutr* 2009 Feb;101(3):440-5

\*Wang et al: Effects of wolfberry fruit on rat's cryotolerance oxytolerance and fatigue-tolerance. *J Qiqihar Med* 2002-01

\*Yoshimura et al: Inhibitory effect of an ellagic acid-rich pomegranate extract on tyrosinase activity and ultraviolet-induced pigmentation. *Biosci Biotechnol Biochem* 2005 Dec;69(12):2368-73

**Beta carotene (vitamin A)** and **Vitamin E** play important roles in reducing and preventing acne.

\*El-Akawi et al: Does the plasma level of vitamins A and E affect acne condition? *Clin Exp Dermatol* 2006 May;31(3):430-4

\*Labadarios et al: Vitamin A in acne vulgaris. *Clin Exp Dermatol* 1987;12:432-6

**Brewer's Yeast** (*Saccharomyces cerevisiae*) is not the same as *Candida* yeast and, therefore, a beneficial food high in trace nutrients, especially the B-vitamins.

\*Weber et al: Treatment of acne with a yeast preparation. *Fortschr Med* 1989 Sep 10;107(26):563-6