

## Special Interest Articles:

- ADHD and B Vitamins
- B Vitamins and Postpartum Depression
- Heartburn
- Arthritis and Bowel Flora
- Children with Peanut Allergies
- Acupuncture and Arthritis
- Grape Seed Extract and Alzheimer's Disease

## Reflux Meds Linked to Osteoporosis and Hip Fractures

The problem with medication is that ALL of them have side-effects. Certain medications for reflux may increase your chance of getting osteoporosis. Use of these drugs have been linked to hip fracture in people over 50, according to research appearing in the *Journal of the American Medical Association* (2006;296:2947-2953). What is most shocking is what University of Michigan researchers found—A study

performed on mice done by researchers from the University of Michigan Medical School at the Howard Hughes Medical Institute showed that acid suppressing medications (proton pump inhibitors, like Prilosec and Prevacid) actually contribute to bacterial overgrowth, and may actually aggravate the condition that they are designed to treat.

## Anxiety and Chamomile

Research appearing in the *Journal of Clinical Psychopharmacology* (2009 Aug;29(4):378–382) looked at the effect chamomile extract had on anxiety. The subjects of the study were 57 people who were given either a standardized chamomile extract (220 mg. of extract obtained from German chamomile standardized to contain 1.2% of apigenin) or a placebo for eight weeks. The dosage was gradually increased

from one capsule per day to up to five capsules per day in some of the subjects. The Hamilton Anxiety Rating (HAM-A) to rate the extent of the subjects' anxiety. Dosage increases were based on the anxiety test scores. Compared to placebo, the group receiving the chamomile extract experienced greater improvement in their HAM-A scores compared to the placebo group.

## ADHD and B Vitamins

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The point is that different children respond to different therapies and there is no "one size fits all" solution for this particular health issue.

A study published in the *Journal of Learning Disabilities* (May, 1982;15(5):258-264) looked at B vitamin supplementation and hyperactivity or cerebral dysfunction. The subjects of the study were 100 children who were either hyperactive or had cerebral dysfunction. They were given 100 mg of thiamin qid, calcium pantothenate (source of B<sub>5</sub>) twice daily, 50 mg of B<sub>6</sub> twice daily or a placebo for three days. If the subjects responded to the vitamin therapy, they were given the supplements a second time, this time for one week. Then were alternated between supplementation and placebo. Those who did not respond well to the initial vitamin therapy were given large doses of B complex, niacinamide or put on an elimination diet.

Hyperkinetic cerebral dysfunction exists for many and varied reasons. Different subjects responded to different aspects of the therapy. Eight of the children in the initial sampling responded to the high-dose thiamin, with four of them needing continued doses of thiamin. Nine of the children responded to the B<sub>6</sub>, with five more responding to an even higher dose of vitamin B<sub>6</sub>. Eight of the children responded to a hypoallergenic diet (the Feingold diet). The point is that different children respond to different therapies and there is no "one size fits all" solution for this particular health issue.

## B Vitamins and Postpartum Depression

According to a study "Dietary Folate and Vitamins B<sub>12</sub>, B<sub>6</sub>, and B<sub>2</sub> Intake and the Risk of Postpartum Depression in Japan: The Osaka Maternal and Child Health Study," Miyake Y, Sasaki S, et al, *J Affect Disord.*, 2006 June 29), B vitamin intake may help to prevent postpartum depression. The subjects of the study were 865 Japanese women who filled out dietary data questionnaires during their pregnancy. Of

the group, 121 developed depression between two and nine months postpartum (scored 9 or higher on the Edinburgh Postnatal Depression Scale). Women who had diets high in riboflavin (vitamin B<sub>2</sub>) were less likely to suffer from postpartum depression than those who had diets that were low in vitamin B<sub>2</sub>.

## Heartburn

### BACTERIA MAY BE PART OF THE PROBLEM

Sometimes bacteria can cause reflux symptoms. What is even more surprising is that low stomach acid favors an environment that allows bacteria to grow—creating a bacterial gastritis. So antacids may be the exact **wrong** thing to do. *Helicobacter pylori*, the bacterium that is implicated in gastric ulcers, is frequently a cause of heartburn (even when there is no ulcer present). Sometimes it is necessary to take a product that can keep the bacteria in check.

### SEEMS COUNTERINTUITIVE, BUT SOMETIMES HYDROCHLORIC ACID IS NEEDED.

Many people who have acid reflux actually are not producing enough stomach acid. This is controversial, traditional medicine does not recognize underproduction of HCl as a health problem. Many times, however, giving HCl helps the pylorus to relax, facilitates stomach emptying and keeps the contents out of the esophagus.

**Patients who need HCl often have symptoms:** Fingernails break easily; gas or bloating immediately after a meal; distaste for meat; vitamin supplements cause nausea; coated tongue (there are other causes of this); itchy anus (there are other causes of this).

There are a number of health issues that have been linked to

underproduction of hydrochloric acid—at least in the natural health community. These include:

- Allergies
- Asthma
- Depression (Neurotransmitters are made from amino acids—HCl is necessary to break protein down into amino acids.)
- Arthritis (Protein is incompletely broken down, so the body steals from the joints to fill its need.)
- A variety of digestive problems, including irritable bowel, constipation, diarrhea and Candidiasis

Patients should not take hydrochloric acid supplements on your own. They need to discuss it with a health professional.

### CAN A GOOD FOOD BE BAD FOR YOU?

Sometimes hidden food sensitivities can be the cause of reflux symptoms. Usually the food is one that is eaten every day. Seldom does the patient associate this food with the symptom, but very often giving up the food produces relief. There are different ways to find and deal with food sensitivities. Sometimes lab tests are performed, sometimes muscle tests are used and sometimes just a trial avoidance of the suspected food works.

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*Many people who have acid reflux actually are not producing enough stomach acid.*

## Arthritis and Bowel Flora

Reactive arthritis, following bouts of diarrhea, bowel infection or bowel inflammation is well-documented. Several species of bacteria have been associated with reactive arthritis including *Vibrio cholerae*, *Salmonella*, *Shigella*, *Yersinia* and *Campylobacter*. Between 10-20% of patients with Crohn's disease develop reactive arthritis. More information about this is found in "Antigens, the Gastrointestinal Tract and Arthritis", Inman, Robert D., M.D., *Rheumatic Disease Clinics of North America* (May 1991;17(2):309-321).

Food, in some instances can produce the symptoms of rheumatoid arthritis. One small study examined 16 patients with rheumatoid arthritis (RA) who reportedly had arthritis related to food consumption. Of the 16, three of the patients demonstrated subjective and objective changes after a blind controlled food challenge. They were also asymptomatic when not exposed to the offending food. It is possible that elimination diets may work for some RA patients. According to the journal article, "Intestinal Flora, Bacteria and Arthritis: Why the Joint", [Hazenberg, M.P., *Scandinavian Journal of Rheumatology* (1995;24(Suppl. 101):207-211)], by products from bowel bacteria may be implicated in certain cases of arthritis.

In another study, "Small Intestinal Bacterial Overgrowth in Patients With Rheumatoid Arthritis", Henriksson, A.E.K., et al, *Annals of Rheumatic Diseases* (1993;52:503-510) 25 patients who tested positive for RA were studied. Eight of the 25 (32%) were either hypochlorhidric (low stomach acid) or achlorhydric (no stomach acid). They

were compared to achlorhydric controls as well as controls with normal stomach acid production, who did not test for rheumatoid factor. Of the subjects with inadequate hydrochloric acid production, half of the controls and half of the RA patients had small intestine bacterial overgrowth. Of the subjects with normal stomach acid production, none of the controls had bacterial overgrowth in the small intestine, but 35% of the RA patients had bacterial overgrowth in the small intestine. The authors conclude that there is a connection between bacterial overgrowth and the disease and that hydrochloric acid production is connected to bacterial overgrowth.

A diet that works to balance the bowel flora, like an elimination diet or a vegan diet may be beneficial to patients with RA. Improving the diet is a safe, inexpensive way to address the disease. Finding and eliminating food sensitivities may also be useful in treating RA. Eating vegetables helps to balance the bowel flora. Adequate enzyme and hydrochloric acid production also helps to keep the bowel flora in balance. These are small studies and observations, but may be significant. It should be noted that Alexander Fleming's discovery of a substance produced by mold that inhibited bacterial growth was not from a large clinical study, and did not get much attention at first. Earlier observers noted that mold suppressed bacterial growth, but thought nothing of it. But these minor observations set the stage for the development of penicillin.

## Children with Peanut Allergies

A double-blind, placebo-controlled study was published in *The Journal of Allergy and Clinical Immunology* (Volume 127, Issue 3, Pages 640-646.e1, March 2011) that look at a possible way to desensitize children with peanut allergies. The subjects of the study were 18 children between the ages of one and 11 with a known peanut allergy. They were randomly divided into two groups and received either a placebo or a very small amount of the allergen extract. The group receiving the dose of peanut extract were given gradually increased doses every two weeks for a period of six months. After each increase in dosage, the treatment group continued with that dose each day. The dose of peanut extract given to the treatment group was maintained for an additional six months once a maximum of 2,000 mcg (2 milligrams) of peanut protein was reached.

After one year (six months of receiving the maximum dose of 2 milligrams of peanut protein), the subjects were challenged with peanut flour mixed in with their food. The subjects were tested with allergy skin prick tests and blood samples were taken at various points during the study.

The subjects who were given the sublingual peanut extract were able to safely consume 20 times more peanut protein than those in the placebo group. Skin tests also showed that the treatment group had a decreased reaction to the peanuts. The amount of peanut tolerated by the treatment group, 1710 milligrams (compared to 85 milligrams for the control group), may be enough to protect from accidental ingestion of peanut (a single peanut weighs about 100 milligrams). This is a small study and the results are encouraging, but not conclusive. More studies need to be performed.

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## Acupuncture and Arthritis

A randomized, controlled trial appeared in the *Annals of Internal Medicine* (2004 Dec 21;141(12):901-10), and it looked at the effect acupuncture had on arthritis. The subjects of the study were 570 patients suffering with arthritis in the knee. Subjects were given either true acupuncture or sham acupuncture for a period of 26 weeks. The patients were evaluated using the Western Ontario and McMaster Universities Osteoarthritis

Index (WOMAC). Evaluations were performed at week 8 and week 26. The group receiving the acupuncture had better scores on the WOMAC test. According to the researchers, acupuncture seemed to provide improvement in function and pain relief as an adjunctive therapy for osteoarthritis of the knee when compared with credible sham acupuncture and education control groups.

## Grape Seed Extract and Alzheimer's Disease

*"We can't solve problems by using the same kind of thinking we used when we created them."*

--Einstein

Tau proteins are important to a properly functioning nervous system. When functioning properly, tau proteins interact with tubulin and strengthen the neural tubes in the axon (a process that extends from the neuron, or nerve cell, to carry a signal). The neural tubes are like highways that allow the nervous signal to travel down the axon.

Neurodegenerative diseases, like Alzheimer's disease, are known as tauopathies. This means that there has been disruption in the tau protein, creating instability in the neural tubes. This disrupts the signals in the central nervous system, leading to symptoms like dementia.

A tau protein is a protein found in neurons, primarily in the central nervous system. These proteins were first identified in the 1970s, and research on tau protein is continuing in many areas of the world, as researchers are curious about the role of these proteins in healthy individuals and in certain diseases which involve the central nervous system.

Previous studies have shown that grape seed extract (specifically, polyphenols derived from the grape seed) protect the tau proteins, and may help protect against neurodegenerative diseases like Alzheimer's disease. In an in-vitro (taking place outside of the body) study, appearing in the *Journal of Alzheimer's Disease* (2009;16(2):433–439), researchers found that grape seed polyphenolic extract (GPSE), prevented disruption of tau proteins. Other research, appearing in the *Journal of Biological Chemistry* (November 21, 2008. 238(47): 32176–32187), supports this finding.

GPSE was able to interfere with disruption of tau proteins in mice in a study that appeared in the *Journal of Neuroscience* (June 18, 2008. 28(25);6388–6392). Researchers were also able to prevent cognitive decline and an Alzheimer's-like pathology (called cerebral amyloid deposition) in mice with the use of GPSE.

