



Natural Standard

The Authority on Integrative Medicine

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Natural Standard provides high quality, evidence-based information about complementary and alternative therapies, diets, exercise and nutrition. For more information, please visit www.naturalstandard.com.

Post-Exercise Recovery Strategies



Now that winter has passed, the summer sun is finally here and the beach is calling, there is no greater time to take advantage of the outdoors and get into shape. A recent study reveals how to avoid post-exercise injuries and fatigue.

Light, active exercises with minimal resistance may be the best post-exercise recovery strategy, a new study suggests.

Researchers from the Academy of Physical Education in Poland investigated the influence of different relaxation modes: stretching (ST), active recovery (AR) and passive recovery (PR) on muscle relaxation after dynamic exercise of the quadriceps femoris, a thigh muscle.

In the study, 10 healthy male volunteers between 24 and 38 years of age performed three sets of dynamic leg exercises with 30 seconds of rest between sets. Immediately after completing the leg exercise, one of the relaxation methods was applied, in a randomized order (AR, PR, ST). Then, subjects performed isometric knee extension to the point of fatigue.

The study found that active recovery produced the most significant recovery.

The study authors concluded that the most appropriate and effective recovery mode after dynamic muscle fatigue involves light, active exercises, such as cycling with minimal resistance.

Spinning, or indoor group stationary cycling, may be a good option. It is a non-impact workout for people of all ages and fitness levels. Spinning may enhance cardiovascular fitness and improve muscle tone. Spinning works various muscle groups, including the quadriceps, hamstrings, calves, hips and abdominal muscles.

Exercising on a regular basis may decrease the risk of developing many illnesses, such as heart disease. According to the U.S. Centers for Disease Control and Prevention (CDC), the failure to exercise regularly is a significant precursor to heart disease, stroke, diabetes and cancer. Exercising on a regular basis is one of the most inexpensive and easiest measures a person can

[Post-Exercise Recovery Strategies](#)

[Gamma Linolenic Acid for Weight Control](#)

[World Conference on Life Sciences and Traditional Medicines](#)

[Self-Hypnosis for Headaches](#)

[Rapid Relaxation Therapy for Dental-Related Anxiety](#)

[1st Canadian Conference on CAM and Mental Health](#)

[Chemoimmunotherapy for Gastric Cancer](#)

[Iron Supplementation in Pregnancy](#)

[Nutrisciences and Health 2007](#)

[Inside Natural Standard](#)

take in order to reduce their risk and/or delay the onset of serious illnesses.

The American Heart Association recommends participating in at least thirty minutes of continuous activity for at least three times a week as a way to help keep blood pressure low and the American Cancer Association recommends exercise to keep cancer at bay.

Integrative therapies with good or unclear scientific evidence for the enhancement of exercise performance include creatine, acupuncture, shiatsu, Alexander technique, astaxanthin, astragalus, bee pollen, bovine colostrum, choline, Coenzyme Q10, garcinia, ginkgo, ginseng, Hellerwork, kiwi, l-carnitine, massage, pantothenic acid, physical therapy, Qi gong, tai chi, thiamin, tribulus, vitamin D, yoga and zinc.

For more information on exercise and related activities, please visit [Natural Standard's Health & Wellness](#) database.

To comment on this story, please click [here](#) to enter the [Natural Standard](#) blog.

References:

- 1) Mika A, Mika P, Fernhall B, et al. Comparison of recovery strategies on muscle performance after fatiguing exercise. *Am J Phys Med Rehabil.* 2007 Jun;86(6):474-81. [View Abstract](#).
- 2) Natural Standard Research Collaboration: The Authority on Integrative Medicine. www.naturalstandard.com. Copyright © 2007.

Gamma Linolenic Acid for Weight Control



Gamma linolenic acid (GLA) may help formerly obese individuals maintain their weight loss, a new study reports.

Researchers from the University of California, Davis investigated whether GLA supplementation would suppress weight regain following major weight loss.

In the double-blind study, 50 formerly obese humans were randomized and given either 890 milligrams/day of GLA (5 grams/day borage oil) or 5 grams/day olive oil (controls) for one year.

Borage (*Borago officinalis*) is an herb native to Syria that has spread throughout the Middle East and Mediterranean. Borage seeds are often pressed to produce oil very high in gamma-linolenic acid (GLA), such as the oil used in this study.

The study found that after one year, weight regain differed between the GLA and control groups. Unblinding revealed lower weight regains in the GLA group compared to the control group.

The study authors concluded that GLA reduced weight regain in humans following major weight loss, suggesting a role for essential fatty acids in fuel partitioning in humans prone to obesity.

GLA is a dietary omega-6 fatty acid found in many plant oil extracts. Commercial products are typically made from seed extracts from evening primrose (average oil content 7-14 percent), blackcurrant (15-20 percent), borage oil (20-27 percent) and fungal oil (25 percent). To a limited extent, GLA is found naturally in the diet in human breast milk, cold-water fish and in organ meats such as liver, but at very low concentrations (1-2 percent).

GLA is available commonly as a dietary supplement and is sold over the counter in capsules or oil to treat a variety of conditions such as eczema, oral mucocoeles (mucus polyyps), high cholesterol, depression, postpartum depression, chronic fatigue syndrome, psoriasis, muscle aches and menopausal flushing.

Integrative therapies with strong or good scientific evidence for weight loss/weight control include ephedra, 5-HTP, the Atkins diet, DHEA and psychotherapy. Please consult a qualified healthcare practitioner before making any health-related decisions. On February 6, 2004, the U.S. Food and Drug Administration (FDA) issued a final rule prohibiting the sale of dietary supplements containing ephedrine alkaloids (ephedra) because such supplements present an unreasonable risk of illness or injury. The rule became effective 60 days from the date of publication. Also, several studies have shown adverse effects associated with the Atkins diet.

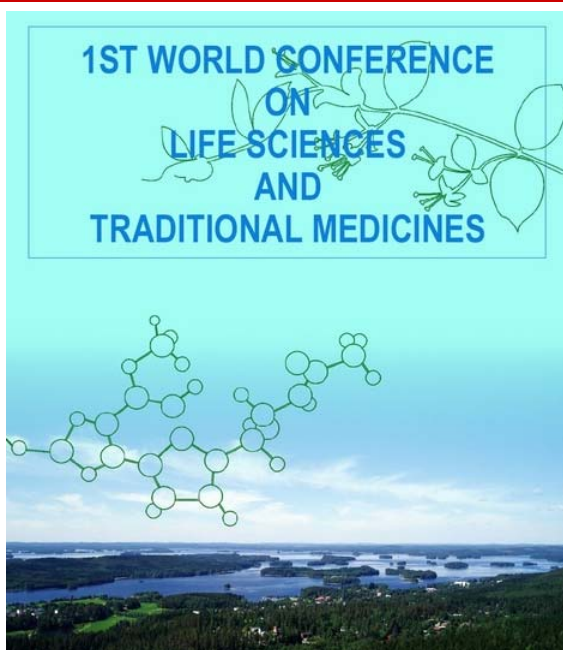
For more information on the safety and efficacy of the therapies mentioned in this article, please visit [Natural Standard's Herbs & Supplements](#) and [Health & Wellness](#) databases.

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References:

- 1) Schirmer MA, Phinney SD. Gamma-linolenate reduces weight regain in formerly obese humans. *J. Nutr.* 2007 Jun;137(6):1430-5. [View Abstract](#).
- 2) Natural Standard Research Collaboration: The Authority on Integrative Medicine. www.naturalstandard.com. Copyright © 2007.

World Conference on Life Sciences and Traditional Medicines



August 22-24, 2007, Espoo, Finland

New discoveries, innovations and business opportunities are beginning to emerge from the convergence of apparently different disciplines of life sciences and traditional medicines. A simultaneous mega trend in consumer markets and wellness revolution is generating an enormous order for such new product innovations.

So far Western pharmaceutical industry has focused mainly on synthetic, single, small molecule medicines. Recent setbacks in this approach are forcing academic and industrial research to look for alternative approaches.

The purpose of this conferences is to explore the possibilities for new therapeutic strategies and product innovations from convergence of life science and traditional medicines, present leading

edge research applying new scientific methods to traditional herbal medicines and provide a forum for researchers to present ideas for new products to the industry and investors.

The conference is aimed at researchers and decision makers in the pharmaceutical, herbal medicine, phytochemical, health food, nutraceuticals and cosmetics industries, at related government and academic organizations and investors for whom new ideas and discoveries are critically important in their search for product, business and investment opportunities.

For details and registration, please visit www.bhbiotech-conference.com.

Please Note: Subscribers and readers of this newsletter are entitled to a **20% discount** of the listed registration fees. To be eligible for the 20% discount, individuals need to fill in the code NSS to the Special Offer Code-box in the registration form.

Additionally, all participants of the conference receive two-weeks FREE access to the **Natural Standard** database.

For questions and proposals for presentations, please e-mail tomi.heiskanen@5esb.com or wclstm07@congreszon.fi.

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Self-Hypnosis for Headaches

Self-hypnosis training in children and adolescents may result in significant improvement of chronic headaches, a new study reports.

Researchers from the University of Minnesota investigated the effect of treatment with self-hypnosis for youth with recurrent headaches in a retrospective review. The review included the outpatient clinical records of 178 consecutive youth referred to the Behavioral Pediatrics Program (University of Minnesota) from 1988 to 2001 for recurrent headaches.

All patients were taught self-hypnosis for self-regulation. Intensity, frequency and duration of headaches before, during and after treatment were measured. Outcomes included number and frequency of visits, types of medication and nature of self-hypnosis practice.

The study found that compared with self-reports before learning self-hypnosis, children and youth who learned self-hypnosis for recurrent headaches reported reduction in frequency of headache from an average of 4.5 per week to 1.4 per week, reduction in intensity (on a self-rating scale of 0 to 12) from an average of 10.3 to 4.7 and reduction in average duration from 23.6 hours to 3.0 hours. No adverse side effects of self-hypnosis were reported.

The study authors concluded that training in self-hypnosis is associated with significant improvement of chronic recurrent headaches in children and adolescents.

The term hypnosis is derived from the Greek word hypnos, meaning sleep. The origin of modern Western hypnotherapy is often traced to the Austrian physician Franz Anton Mesmer (1734-1815). Mesmer believed that illness is caused by an imbalance of magnetic fluids in the body that can be corrected through "animal magnetism." He asserted that the hypnotist's own personal magnetism can be transferred to a patient. The term "mesmerize" is derived from Mesmer's name.

In the mid 20th Century, the British and American Medical Associations and the American Psychological Association endorsed hypnosis as a medical procedure. In 1995, the U.S. National Institutes of Health issued a consensus statement noting the scientific evidence in favor of the use of hypnosis for chronic pain, particularly pain associated with cancer.

Several studies report improvements in severity and frequency of tension headaches following several weekly hypnosis sessions. Early research suggests that hypnosis may be equivalent to other relaxation techniques, biofeedback or autogenic training.



Other integrative therapies with good scientific evidence in the treatment of headaches include 5-HTP, butterbur, chiropractic, spinal manipulative therapy, feverfew, guided imagery and peppermint oil.

For more information on hypnosis or the other therapies mentioned above, please visit [Natural Standard's Herbs & Supplements](#) and [Health & Wellness](#) databases.

To comment on this story, please click [here](#) to enter the [Natural Standard](#) blog.

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1) Kohen DP, Zajac R. Self-hypnosis training for headaches in children and adolescents. *J. Pediatr.* 2007 Jun;150(6):635-9. [View Abstract](#).

2) Natural Standard Research Collaboration: The Authority on Integrative Medicine. www.naturalstandard.com. Copyright © 2007.



Rapid Relaxation Therapy for Dental-Related Anxiety

Rapid relaxation (RR), a type of relaxation that involves a brief set of suggestion while applying a pain reliever to the skin, may reduce anxiety during local anesthesia and subsequent dental treatment, a new study reports.

Researchers from Dalhousie University in Nova Scotia, Canada explained that RR is recommended for managing mild dental anxiety, which is almost universal. RR combines elements of hypnosis, meditation and good basic chair-side manner.



The study found that RR is generally noninvasive, takes little additional time and empowers patients by providing them with an attractive, immediate alternative to catastrophization. Catastrophization is a cognitive distortion that can magnify pain and suffering because of the preoccupation with the experience.

The study found that RR markedly improves the quality of the dental experience.

Other relaxation techniques include behavioral therapeutic approaches that differ widely in philosophy, methodology and practice. The primary goal is usually non-directed relaxation. Most techniques share the components of repetitive focus (on a word, sound, prayer phrase, body sensation or muscular activity), adoption of a passive attitude towards intruding thoughts and return to the focus.

Deep and brief methods exist. Deep methods include autogenic training, progressive muscle relaxation (PMR) and meditation (although meditation is sometimes distinguished from relaxation based on the state of "thoughtless awareness" that is said to occur during meditation). Brief methods include self-control relaxation, paced respiration and deep breathing. Other relaxation techniques include guided imagery, deep breathing/breathing control, passive muscle relaxation and refocusing. Applied relaxation involves imagination of relaxing situations, with the intention of inducing muscular and mental relaxation.

Clinical studies suggest that relaxation techniques may be beneficial in patients with anxiety, although these approaches do not appear to be as effective as psychotherapy. Relaxation has also been suggested in patients after surgery to speed up recovery, require less pain medication, lower blood pressure and reduce postoperative complications. Relaxation techniques are sometimes

used by people with insomnia or other sleep disorders.

Other integrative therapies with strong or good scientific evidence in the management of anxiety include kava, music therapy, aromatherapy, chiropractic, spinal manipulative therapy, hypnotherapy, hypnosis, lavender, peppermint oil, psychotherapy and yoga.

For more information on relaxation or the therapies mentioned above, please visit [Natural Standard's Herbs & Supplements](#) and [Health & Wellness](#) databases.

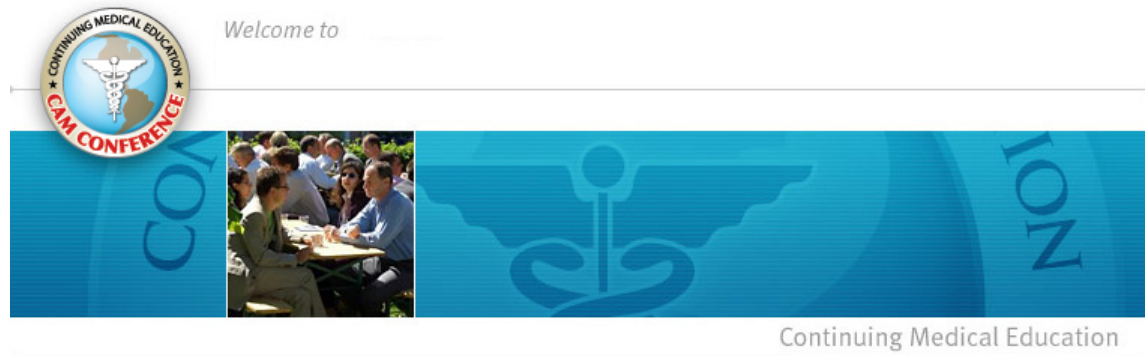
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1) Lovas JG, Lovas DA. Rapid relaxation--practical management of preoperative anxiety. J Can Dent Assoc. 2007 Jun;73(5):437-40. [View Abstract](#).

2) Natural Standard Research Collaboration: The Authority on Integrative Medicine. www.naturalstandard.com. Copyright © 2007.

1st Canadian Conference on CAM and Mental Health



Continuing Medical Education

August 31-September 2, 2007, Medicine Hat Lodge and Casino, Medicine Hat, Alberta, Canada

Among the topics to be discussed are: Traditional Chinese Medicine and Mental Health; Integrating Conventional and Alternative Approaches to Mental Health Care; Energy Medicine, Aboriginal Healing and Mental Health, Ayurvedic Medicine and Mental Health; and Spirituality and Mental Health.

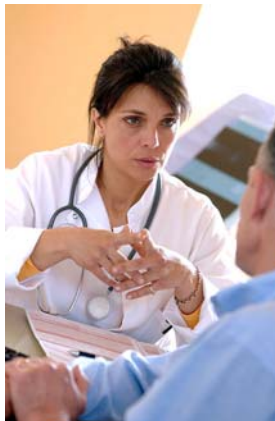
The conference will feature workshops on the following subjects: Biofeedback; Hypnosis; Nutrition & Mental Health, Taoist Tai Chi; Recreation & Mental Health; and Homeopathy & Mental Health.

There is an optional golf tournament on Saturday as well as a chance to visit local sites or a spa.

Please visit www.camspecialistsconnect.com for a full program, list of speakers, speakers' biographies and registration information. Individuals with questions may contact Jeannie by phone 1.403.580.2822 or e-mail camconference@gmail.com.

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Chemoimmunotherapy for Gastric Cancer



Chemoimmunotherapy, or chemotherapy combined with immunotherapy, may help treat gastric cancer, a new study posted by PubMed under complementary and alternative medicine (CAM) suggests.

Chemotherapy uses different drugs to kill or slow the growth of cancer cells. Immunotherapy uses treatments to stimulate or restore the ability of the immune system to fight cancer. Please note that some of the complex medical terms below are difficult to translate from professional language to consumer language and may be difficult to understand. Since many oncology patients use CAM therapies, such as vitamin A and probiotics, for stimulating the immune system, another form of immunotherapy is discussed here. In the study discussed below, the chemoimmunotherapy includes mostly drugs.

Researchers from the Carlo Ferri Foundation and University of L'Aquila in Italy explained that chemotherapy agents docetaxel, capecitabine and 5-fluorouracil have been shown to be active in the treatment of metastatic (spreading) gastric cancer. The study tested this combination in a clinical trial.

The study involved 41 patients with metastatic gastric cancer who were an average age of 64 years. All patients were given one dose of the drug docetaxel every four weeks. They also received the drugs leucovorin, 5-fluorouracil and capecitabine twice daily on days one and two every two weeks.

The 27 patients in the experimental group also received low-doses of interleukin-2 and 13-cis-retinoic acid as maintenance immunotherapy. Cis-retinoic acid is an anti-cancer drug that is derived from vitamin A.

The study found a sustained improvement in the 27 patients treated with chemoimmunotherapy. Docetaxel in combination with leucovorin, 5-fluorouracil and capecitabine followed by low-dose immunotherapy medications was well tolerated and showed a significant activity in patients with metastatic gastric cancer.

As mentioned above, cancer immunotherapy helps stimulate the immune system to fight against cancerous cells in the body. In addition to interleukins and cis-retinoic acid, immunotherapy may also involve the administration of therapeutic interferons as drugs. Interferon medication is a man-made version of a protein that is involved in the immune system. The body produces interferons to help fight against disease and infection. These proteins stimulate the immune cells to destroy body cells that have become infected with cancer.

Cancer vaccines are also being invested in human trials. Cancer vaccines are given to patients after they have been treated for various cancers including melanoma, lymphoma, breast cancer, and colon cancer. Vaccinations may help the body fight against cancerous cells and prevent it from recurring.

Integrative therapies with strong or good scientific evidence in the treatment of gastric cancer include vitamin A, probiotics, psychotherapy and selenium. Further research is needed before any of these therapies can be recommended and advice of a medical oncologist and pharmacist is crucial before using any therapy in addition to those prescribed.

For more information on integrative gastric cancer therapies, please visit [Natural Standard's Comparative Effectiveness](#) database.

To comment on this story, please click [here](#) to enter the [Natural Standard](#) blog.

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- 1) Recchia F, Saggio G, Candeloro G, et al. Chemoimmunotherapy in the treatment of metastatic gastric cancer. *Anticancer Drugs*. 2007 Jun;18(5):597-604. [View Abstract](#).
- 2) The Association for Immunotherapy of Cancer. www.c-imt.org. Accessed June 26, 2007.
- 3) Natural Standard Research Collaboration: The Authority on Integrative Medicine. www.naturalstandard.com. Copyright © 2007.

Iron Supplementation in Pregnancy



Iron supplementation during pregnancy should only be considered in anemic women or women with low iron/low red blood cell counts, a new study reports.

Researchers from Tarbiat Modarres University in Iran studied the effect of iron supplementation on pregnancy outcome in pregnant women with anemia. Symptoms of anemia include weakness, fatigue, lack of energy and dizziness.

In the randomized, double-blind, placebo-controlled trial, 727 pregnant women with anemia in the early stage of the second trimester were given one tablet of 50 milligrams of ferrous sulphate daily in the case group (370 women) or placebo in the control group (357 women) throughout pregnancy.

The study found no significant differences in demographic and obstetric characteristics between the two groups before any intervention. However, small-for-gestational-age birth rate and the number of women with hypertension (high blood pressure) disorder increased significantly in the case group in comparison with the control group.

The study authors concluded that routine iron supplementation in women with normal red blood cell counts is not rational and may be harmful.

Iron is an essential mineral and an important component of proteins involved in oxygen transport and metabolism. Iron is also an essential cofactor in the synthesis of neurotransmitters such as dopamine, norepinephrine and serotonin. About 15 percent of the body's iron is stored for future needs and mobilized when dietary intake is inadequate. The body usually maintains normal iron status by controlling the amount of iron absorbed from food.

There are two forms of dietary iron: heme and non-heme. Sources of heme iron include meat, fish and poultry. Sources of non-heme iron, which is not absorbed as well as heme iron, include beans, lentils, flours, cereals and grain products. Other sources of iron include dried fruit, peas, asparagus, leafy greens, strawberries and nuts.

Iron deficiency can be determined by measurement of iron levels within the body, mainly serum ferritin levels, which can also help distinguish between iron deficiency anemia and anemia associated with chronic disease.

Previous studies have shown that iron supplements may help prevent iron deficiency anemia in pregnant women. Anemia in pregnant women is associated with adverse outcomes such as low birth weight, premature birth and maternal mortality. Screening by a qualified healthcare provider is needed. Low doses are generally well tolerated and associated with better compliance.

Pregnant or breastfeeding women should seek guidance from a qualified healthcare provider

before taking dietary supplements. The U.S. Food and Drug Administration (FDA) has given iron a FDA Pregnancy Category B rating, meaning it is usually safe but benefits must outweigh the risks. Iron has also received a FDA Pregnancy Category C rating, meaning that safety for use during pregnancy has not been established for replenishing depleted iron stores in the bone marrow where it is incorporated into hemoglobin.

For more information on iron, please visit [Natural Standard's Herbs & Supplements](#) database.

To comment on this story, please click [here](#) to enter the [Natural Standard](#) blog.

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1) Ziaei S, Norrozi M, Faghihzadeh S, et al. A randomised placebo-controlled trial to determine the effect of iron supplementation on pregnancy outcome in pregnant women with haemoglobin \geq 13.2 g/dl. BJOG. 2007 Jun;114(6):684-8. [View Abstract](#).

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Nutrisciences and Health 2007



July 10 -12, 2007, Charlottetown, Prince Edward Island, Canada

Nutrisciences and Health 2007: Bioprospecting for Neuroprotectants will be hosted by the National Research Council of Canada's Institute for Nutrisciences and Health (NRC-INH).

The Conference's International Science Advisory Panel developed a program that will explore the neuroscience implications of the use of naturally-occurring bioactives. Experts in this field will present on topics such as: neurodegeneration; bioprospecting; genomics and nutrition; neuroinflammation; and product development.

For more information, please contact:
National Research Council of Canada Institute for Nutrisciences and Health 550 University Avenue
Charlottetown, PE C1A 4P3.

Additionally, interested individuals may call 902.566.7403, fax 902.569.4289, e-mail nsh2007@nrc.gc.ca or visit www.nsh2007.nrc.gc.ca.

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Inside Natural Standard



Natural Standard: New Database!

Natural Standard has added a *NEW* database: the Medical Conditions database.

Our Medical Conditions database monographs cover information on the background, risk factors, causes, signs & symptoms, diagnosis,

complications, conventional treatment *and* integrative therapies, prevention, new research and related support groups of countless diseases and conditions.

The monographs are categorized by medical specialties including: Allergy & Immunology, Cardiopulmonary, Dermatology, Endocrinology, GI & GE, Hematology & Oncology, Nephrology, Neurology & Psychiatry, EENT and Rheumatology & Orthopedics.

Don't Forget

Natural Standard has launched an audio version of its newsletter stories. Interested readers can listen by clicking on the [audio](#) tab of the **Natural Standard** website or through [iTunes](#) or [digg.com](#).

Welcome

Natural Standard would like to welcome Catherine Armato to our Member Services team and Minney Varghese and Michael Goble to our Content team.

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