# **Natura** Facts

Pregnancy:
Improving Health Outcomes
of Women and Their Children

Chronic Fatigue Syndrome: A Multifaceted Problem

GMOs, Glyphosate, and Your Health

**Protein for** Power

> Articles, Recipes, Information, and New Product Announcements Free · May/June 2015



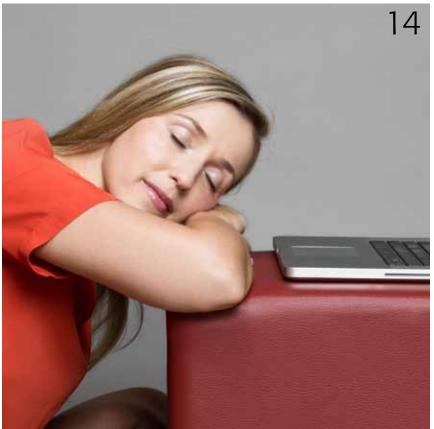


# **Table of Contents**

May/June 2015











- 05 Is Bladder Pressure Handicapping Your Game?
- O6 Health Advice: Pregnancy
- Naturopathic Currents: Preeclampsia
- Borage Oil:
  Explore the Bounty of Benefits
- Product Updates: Chaga & Resilience Mushroom Complex
- Health Advice:
  Chronic Fatigue Syndrome
- MCT Energy: Fast, Fun, and Functional
- 17 Product Update: Active Folic Acid
- 18 GMOs, Glyphosphate, and Your Health
- Product Update:
  Garcinia Cambogia
- Product Update: Heme Iron
- 22 Protein for Power
- 23 Culinary Corner
- 26 Vitamin E<sup>8</sup>:
  Compound Interest
- 27 Choose to Care: UNICEF

# **Editor's Letter**



We've all met people that have changed our lives. Some may have been professional encounters with a direct impact on our career and ambition; people that make us see things under a new light. Or perhaps a new friendship with someone that allows us to be ourselves and flourish; a bond that grows stronger and "stands the test of time." There are also romantic encounters that remain etched on our hearts for eternity.

This issue focuses on one of the most extraordinary and unique encounters a woman can have: the birth of her child. It will grow to be

the strongest and most loyal bond of them all. Fortunately, it is possible to be prepared for such a life-changing experience. Our current issue features articles and product suggestions that will help women make proactive, informed health decisions before, during, and after childbirth.

Speaking of newborns, we are pleased to introduce several new products that will have a positive impact on your health. We will also feature products that will help you meet your energy demands for the spring and summer season.

We don't meet people by accident; they cross our paths for a reason.



At New Roots Herbal, we are relentless in our aim to make the best natural health products in the world. To achieve this, we have an extensive staff devoted to quality assurance.



### Brought to you by



3405, F.-X.-Tessier street, Vaudreuil-Dorion, QC J7V 5V5 800 268-9486 • newrootsherbal.com info@newrootsherbal.com

Proud Member of







Natural Facts bimestrial magazine published and distributed through Canada.

**Editor-in-Chief** Sonia Lamoureux

**Graphic Designer** Cédric Primeau

**Translation/Revision**Marie-Jo Mercier · Pierre Paquette

### **Research & Writing**

Heidi Fritz · Joanna McDonald Tanmayo Krupanszky · Ashley Kowalski Gordon Raza · Philip Rouchotas

#### Recipes

Joanna McDonald · Theresa Nicassio · Gordon Raza

**Choose to Care** Noha Elkafrawy

Printing

Iranscontinenta

Distribution

AMP / Transcontinental

**Advertising Sales** 

Sonia Lamoureux lamoureuxs@newrootsherbal.com 450 424-9486 ext. 262

**Total Copies Distributed** 36,500 (English and French)

# **Prostate Perform**



# Is Bladder Pressure Handicapping Your Game?

# Prostate Perform Will Change That.

Men start to convert healthy testosterone to dihydrotestosterone, a potent dangerous form of testosterone, after the age of 40. The more testosterone you have, the more dangerous, dysfunctional dihydrotestosterone you may produce. Your prostate gland may begin to grow larger and larger because

dihydrotestoterone can create rapid cellular division / growth of the prostate. Men with higher healthy testosterone levels will have more good testosterone to potentially convert to the dangerous dihydrotestosterone.

# Getting up to urinate at night? New Roots Herbal can change that!

Your bladder empties via a urinary tube (urethra) that passes through the middle of the prostate gland. When the prostate starts growing larger, it puts pressure on the urethra and restricts the flow of urine. Just like a blood pressure test on your arm, the intense pressure of the growing prostate begins to squeeze and clamp down on the urethra, which prevents you from urinating easily. You may find yourself straining to urinate, with

flow reduced to a trickle. At night, you may be sleeping poorly—and so is your partner—as you get up multiple times to urinate.

Get **Prostate**Perform today and change your life in just 7 to 10 days! Two softgels of **Prostate**Perform daily is all you need. The ingredients have been clinically tested to perform better than pharmaceutical drugs, with no side effects such as impotence.

New Roots Herbal sets the standard — no other prostate product outperforms this formula.



The scientific term for an enlarged prostate is benign prostate hyperplasia (BPH). There is growing discussion in the scientific community linking BPH to the potential development of serious prostate disease.

# **Health Advice**



# Pregnancy

Improving Health Outcomes of Women and their Children



by Heidi Fritz, MA, ND

Pregnancy is — after the nausea and vomiting is over — a happy time. It is also a critical time in laying down the foundations of health for a new generation. While there is good reason for caution with respect to indiscriminate use of both natural health products and pharmaceuticals during this time, there exist a handful of natural agents that have been thoroughly shown to improve the health of women and their offspring when taken during pregnancy.

Omega-3 fatty acids are one of the best-recognized natural health products. Their role in pregnancy is no less important. Docosahexaenoic acid (DHA) is critical as a structural component of the baby's developing brain and nervous system. Particularly in the third trimester, the brain's accretion of fats including DHA rapidly escalates. DHA is also important for the development of the retina of the eye and auditory pathways. According to A.P. Simopoulos, "DHA accounts for 40% of the membrane phospholipid FA [fatty acids] in the brain."[1] DHA has been shown to influence brain-programming of several

neurotransmitter pathways, including dopamine, serotonin, choline, and gamma-amino butyric acid (GABA), as well as dopaminergic and serotonergic neurotransmitter systems.[2] Infant formulas intended for preterm infants are fortified with DHA to provide this important nutrient that would otherwise be provided in utero during this time. Maternal supplementation with DHA has been shown to beneficially influence the infant's visual acuity, measures of early cognitive ability, and motor development.[2]

Keeping in mind maternal health as well, especially as it pertains to risk of postpartum depression, the mood-enhancing effects of eicosapentaenoic acid (EPA) are important during pregnancy. Meta-analytic reviews have consistently demonstrated that EPA supplementation — but not DHA supplementation — is effective in the treatment of depression.<sup>[3, 4]</sup> Therefore, a 2:1 ratio of EPA:DHA is ideal for use during pregnancy, benefiting maternal mood as well as the infant's neurological development.

A second important supplement during pregnancy is a high-quality probiotic. Supplementation with probiotics influences the infant's immune development, resulting in a reduced risk of atopy, which includes eczema, wheeze/asthma, and allergy in the offspring.<sup>[5, 6]</sup> This protective effect seems to be particularly true for infants



delivered via cesarean section. On the other hand, the use of antibiotics during pregnancy has been shown to increase the risk of asthma in the child by up to 30%.<sup>[7]</sup> For the mom, the use of probiotics has been shown to reduce the incidence of vaginal infections during pregnancy.<sup>[8]</sup>

The mechanism for this effect on immune development appears to be related to uptake of probiotic species from the maternal gut. It is little-known that the placenta actually harbors a unique microbiome.<sup>[9]</sup> During late pregnancy and lactation, a bacterial enteromammary pathway is established ("enteromammary trafficking"!), through which specialized immune cells select specific bacteria from the maternal intestinal tract, chaperoning them through the bloodstream to the mammary gland where they enter the breast-milk and colonize the infant gut.[10, 11]

Finally, vitamin D should be supplemented by Canadian pregnant women, due to the high prevalence of deficiency in Canada. Suboptimal vitamin D status has been associated with an increased risk of preterm birth,<sup>[12]</sup> preeclampsia, gestational diabetes, and small-for-gestational-age infants.<sup>[13]</sup>

#### References

- Simopoulos, A.P. "Evolutionary aspects of diet: the omega-6/omega-3 ratio and the brain." Molecule Neurobiologie Vol. 44, No. 2 (2011): 203–215.
- Carlson, S.E. "Docosahexaenoic acid supplementation in pregnancy and lactation." American Journal of Clinical Nutrition Vol. 89, No. 2 (2009): 678S-684S.
- Sublette, M.E., et al. "Meta-analysis of the effects of eicosapentaenoic acid (EPA) in clinical trials in depression." *Journal of Clinical Psychiatry* Vol. 72, No. 12 (2011): 1577-1584.
- Martins, J.G. "EPA but not DHA appears to be responsible for the efficacy of omega-3 long chain polyunsaturated fatty acid supplementation in depression: evidence from a meta-analysis of randomized controlled trials." Journal of the American College of Nutrition Vol. 28, No. 5 (2009): 525-542.
- Elazab, N., et al. "Probiotic administration in early life, atopy, and asthma: a meta-analysis of clinical trials." Pediatrics Vol. 132, No. 3 (2013): e666–e676.
- Dang, D., et al. "Meta-analysis of probiotics and/or prebiotics for the prevention of eczema." Journal of Internaltional Medical Research Vol. 41 No. 5 (2013): 1426–1436.
- Metsälä, J., et al. "Prenatal and post-natal exposure to antibiotics and risk of asthma in childhood." Clinical and Experimental Allergy Vol. 45, No. 1 (2015): 137–145.
- Othman, M., J.P. Neilson, and Z. Alfirevic. "Probiotics for preventing preterm labour." Cochrane Database of Systematic Reviews Vol. 1 (2007): CD005941.
- Aagaard, K., et al. "The placenta harbors a unique microbiome." Science Translational Medicine Vol. 6, No. 237 (2014): 237ra65.
- Rodríguez, J.M. "The origin of human milk bacteria: is there a bacterial entero-mammary pathway during late pregnancy and lactation?" Advances in Nutrition Vol. 5 No. 6 (2014): 779–784.
- Fernández, L., et al. "The human milk microbiota: origin and potential roles in health and disease." Pharmacological Research Vol. 69 No. 1 (2013): 1-10.
- Bodnar, L.M., R.W. Platt, and H.N. Simhan. "Earlypregnancy vitamin D deficiency and risk of preterm birth subtypes." Obstetrics and Gynecology Vol. 125, No. 2 (2015): 439-447.
- Wei S.Q., et al. "Maternal vitamin D status and adverse pregnancy outcomes: a systematic review and metaanalysis." Journal of Maternal-Fetal and Neonatal Medicine Vol. 26, No. 9 (2013): 889–899.

# **Naturopathic Currents**

# Preeclampsia

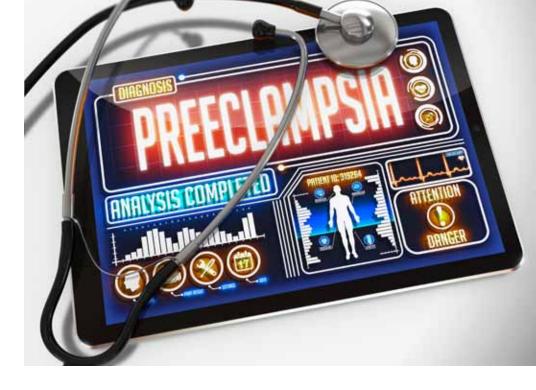
Natural Treatments



by Ashley Kowalski HBSc, ND

#### What Is It?

Preeclampsia is a potentially life-threatening condition that occurs after 20 weeks of gestation, which is during the third trimester of pregnancy. There are two subtypes: earlyonset preeclampsia occurs prior to 34 weeks gestation, whereas late-onset occurs after the 34th week. This condition can also occur a few days following delivery. Although uncommon, preeclampsia does occur in approximately 5-7% of all pregnant women, and medical attention should be taken immediately, as the condition is serious enough to threaten the mother's life and damage the fetus. If preeclampsia is not properly managed, it has the potential to progress to eclampsia. Eclampsia is more dangerous than preeclampsia. Statistics show that eclampsia occurs in 3% of cases. According to the World Health Organization (WHO), approximately 100 000 women die annually from preeclampsia and its complications. It is presently the leading cause of maternal and fetal mortality and morbidity worldwide.



### Causes

The definitive underlying cause of preeclampsia is not known at this time. However, there are multiple factors which do play a role in its pathogenesis: a history of insulin resistance; being overweight; lack of exercise: excess intake of sugars and high-glycemic foods; increased free-radical production: decreased antioxidant levels: increased homocysteine levels; poor blood flow to the placenta and other organs (leading to bloodvessel constriction); nutritional deficiencies (particularly calcium, magnesium, omega-3 fatty acids, arginine, and protein); as well as emotional stress and dominance of the sympathetic nervous system.

Several risk factors put one at increased risk of developing preeclampsia: those with a previous or family history of preeclampsia; women younger than 20 or older than 35 years of age; nulliparous women; and multiple pregnancies. In addition, those individuals with high blood pressure before or during pregnancy, and with diabetes or a strong family history of it, have an increased likelihood of developing preeclampsia.

Some sources theorize that an imbalance between thromboxane A2 (vasoconstrictor and platelet aggregator) and prostacyclin (vasodilator) may exist in preeclampsia patients. Another theory is that of abnormal trophoblastic invasion of spiral arteries, resulting in a lack of oxygen being delivered to the placenta and fetus, and subsequently endothelial injury occurs, which is responsible for the symptom manifestation of preeclampsia. Therefore, preeclampsia manifests as an abnormal vascular response to placenta formation. It is characterized by an increase in systemic vascular resistance, an increase in platelet activation, activation of the coagulation system, and endothelial cell

dysfunction. Endothelial cell dysfunction is responsible for the inflammation seen in preeclampsia. The inflammatory response is thought to cause symptoms of hypertension and proteinuria. Preeclampsia has long been considered an immune-mediated syndrome, as preeclamptic women show high levels of inflammatory cytokines and autoantibodies in circulation.

#### Prevention

Preeclampsia results from a state of malnutrition during pregnancy. It can be prevented by making dietary and lifestyle modifications. It is recommended that women who plan on conceiving, or who have conceived, eat foods high in calcium and consume 60 to 80 g of protein daily. Protein sources should include nuts, seeds,



beans, tofu, organic chicken, and eggs. Avoid saturated and trans fats as well as vegetable oils (which are high in inflammatory omega-6 fatty acids). Women are encouraged to consume complex carbohydrates including whole grains, beans, and vegetables. Foods high in magnesium (tofu, soybeans, almonds, Swiss chard, brown rice, banana, and avocado, to name a few) are recommended for a healthy blood pressure. Also, increase intake of fruits and vegetables to increase antioxidant levels and offset free-radical production. Salt intake should not be limited, and adequate caloric intakes prior to and throughout pregnancy are recommended for a safe and healthy delivery. Food sources high in potassium are also effective: avocados, sweet potatoes, and bananas are only a few.

General consensus is focusing on nutritional education as a preventative measure. Stress-reduction techniques are also beneficial for blood pressure and help the body shift to a parasympathetic state: try yoga, meditation, or deep-breathing exercises. Stress-reduction techniques should be used in conjunction with other interventions for best results (see the *Natural Treatments* section for more details).

#### Diagnosis

Preeclampsia is diagnosed when a specific set of symptoms present themselves in the later stages of pregnancy. In order to make an accurate diagnosis, the following symptoms must be present: new-onset hypertension (high blood pressure readings above 140/90 mmHg), swelling/edema (water retention that is usually seen in or around the face and in the extremities), and protein in the urine (significantly high levels of protein: greater than 3 g of protein in 24 h).

Severe preeclampsia can be diagnosed if any of the following symptoms are present: hypertension (greater than 160/110 mmHq), protein in the urine (less than 5 q in a 24 h urine collection), oliquria (excessive urination greater than 400 ml in 24 h), cerebral or visual disturbances, epigastric pain (in the upper-right quadrant of the abdomen), pulmonary edema (fluid in the lungs), thrombocytopenia (low platelet count, liver dysfunction, or severe intrauterine growth restriction.

Eclampsia patients may present primarily with seizures, altered mental status, blurred vision, headaches, liver damage, breakdown of red blood cells, and low platelets.

Skilled professionals are required to help manage preeclampsia and eclampsia. Women with mild preeclampsia are prescribed bed rest, and are monitored every couple of days. If the condition appears to be worsening, an emergency cesarean section is performed. Presently, delivery of the placenta is the only cure for the disease.



### **Natural Treatments**

Folic Acid, Vitamin  $B_6$ , and Vitamin  $B_{12}$  — Homocysteine levels may be higher in women who have preeclampsia. Homocysteine is known to cause inflammation in the blood vessels and is correlated with heart attacks and strokes. Folic acid (2 mg), and vitamins  $B_6$  (100 mg) and  $B_{12}$  (800 mcg) are known to lower blood homocysteine levels.

Vitamin C and Vitamin E — Free-radical production is high in women with preeclampsia. Vitamins C (1000 mg) and E (400 IU) are antioxidants that can help offset and decrease free-radical production in the body. beta-Carotene, beta-cryptoxanthin, lutein, and zeaxanthin are additional antioxidants that can help reduce the risk of preeclampsia.

Fish Oil — Inflammation, hypertension, and a reduction in placental blood flow are all common in preeclampsia. Fish oil (3000 mg) has anti-inflammatory properties and is also good at improving placental blood flow and hypertension through its vasodilating properties.

Calcium and Magnesium — An overactive sympathetic nervous system may be a causative factor in this condition. Calcium (1200 mg) and magnesium (600 mg) activate the parasympathetic nervous system and also help to reduce blood pressure.

Selenium — Oxidative stress is a common predisposing factor to numerous pathologies. Selenium (200 mcg) is known to help decrease oxidative stress, and thus may help with symptom management.

Chromium and alpha-Lipoic Acid — Insulin resistance is a risk factor for preeclampsia. Chromium (400 mcg) and alpha-lipoic acid (200 mg) are known to help regulate blood sugar levels.

L-Arginine — Hypertension can cause long-term problems if not treated quickly, especially to the blood vessels. L-Arginine (3000 mg) may help protect the endothelium of blood vessels and decrease blood viscosity.

# Brief Overview of Pharmaceuticals

Aspirin (at a low dose) is known to be an effective preventive measure for women at high risk of developing preeclampsia.

Magnesium sulphate is the anticonvulsant of choice for treating eclampsia. It has been shown to reduce the risk of future seizures and is more effective than other anticonvulsive agents such as diazepam and phenytoin. This treatment is also safer for the baby, but is not without risk.

Methyldopa is the drug of choice for mild-to-moderate hypertension; however, it may cause drowsiness. Alternative choices include labetalol and calcium channel blockers. Avoid atenolol, angiotensin-converting enzyme inhibitors, and angiotensin receptor antagonists, as these are contraindicated in pregnancy.



Make sure to consult with a medical doctor prior to taking any medication.

### Conclusion

Preeclampsia is a condition that has life-threatening consequences if not treated immediately. If you are a pregnant woman experiencing symptoms of preeclampsia, it is important to seek medical attention. Although the cause remains unknown, advancements in research are being made,

and several theories exist for the cause of the condition. It is thought that endothelial cell dysfunction and inflammation are ultimately responsible for symptom manifestation. Dietary and lifestyle modifications made prior to and following conception may reduce the likelihood of developing preeclampsia and eclampsia. Several natural therapies exist which may help with symptom management, although there is currently no cure for the condition besides

delivery of the placenta.

Pharmaceuticals may be prescribed by a medical doctor for symptom management.

Remember to consult with a health-care professional before taking any supplements or medication.

For references and other great articles, visit

NaturopathicCurrents.com

# Explore the Bounty of Benefits

Borage oil is renowned for relief from cramping and bloating associated with premenstrual syndrome. It's also recognized with nourishing the skin for an energized, succulent, and youthful glow. In fact, the systemic anti-inflammatory benefits of **Borage**Oil can deliver relief from allergies, arthritis, and psoriasis, as well as improve cardiovascular well-being.

BorageOil is a potent source of gamma-linoleic acid (GLA), the fatty acid that fuels production of hormone-like compounds called prostaglandins that mediate inflammation. The body can produce its own GLA from linoleic acid; however, the process relies upon a specific



enzyme which can be destroyed by many factors including stress, nicotine, alcohol, vitamin deficiencies, saturated and *trans* fats, as well as diabetes.

Certified organic, cold-pressed, and non-GMO, New Roots Herbal's **Borage**Oil softgels contain a potency-validated 24% GLA per 1000 mg softgel. The importance of exploring the therapeutic potential of borage oil is that it can solve your health concerns by quenching your body with the nutrients it demands, yet cannot produce

enough of. Although relief from the symptoms of premenstrual syndrome (PMS) and epidermal health are the most popular uses for borage oil, it can also play a role in managing inflammation and joint pain during exercise. Sore knees and hips are the most common complaints on the road to better fitness; borage oil can help with the peaks and valleys of exercise-induced inflammation and recovery.

Empower yourself to feel better, look better, and enjoy an active, healthy lifestyle with New Roots Herbal's **Borage**Oil.



# The Sky is the Limit for Chaga

The arrival of **Chaga** (*Inonotus obliquus*) marks the seventh species in our family of mushroom extracts. Chaga extract is produced by the time-honoured traditional hotwater method employed in traditional Chinese medicine. This method gently dissolves tough, indigestible cell walls to release intact polysaccharides for maximum therapeutic potency.

The 40% polysaccharide profile of **Chaga** delivers benefits common to our entire selection, including many distinct immune systemstrengthening traits. In addition, polysaccharides unique to chaga have been promoted for their antibacterial, anti-inflammatory, antitumour, antioxidant, and liver-protective activity.

The preferred habitat for this charred-looking fungus with its cork-like consistency are mature birch trees. Unlike the majority





of fungus people harvest by looking at the ground, chaga can be spotted looking up to twenty feet skyward. New Roots Herbal's **Chaga** is, however, sustainably grown on birch logs in a climatecontrolled, pesticide- and herbicide-free environment. The cork-like growth we recognize as chaga is not a fruiting body such as a mushroom, but a dense. nutrient-rich mass of mycelium. This mycelium taps directly into the bark and tree core, and creates the potent therapeutic compound betulinic acid. Current research with betulinic acid has demonstrated distinct antiviral abilities with promising effects against the herpes virus.[1]

Betulinic acid found in chaga has also shown antitumour activity by means of destroying the mitochondria (power plants) of diseased cells.<sup>[2]</sup>

Discover the wealth of benefits with New Roots Herbal's **Chaga**, containing 350 mg (40% polysaccharides) per vegan-friendly capsule.

#### References

- Pan, H.H., et al. "Aqueous extract from a Chaga medicinal mushroom, *Inonotus obliquus* (higher Basidiomycetes), prevents herpes simplex virus entry through inhibition of viral-induced membrane fusion." *International Journal of Medicinal Mushrooms* Vol. 15, No. 1 (2013): 29–38.
- Gheorgheosu, D., et al. "Betulinic acid as a potent and complex antitumor phytochemical: A minireview." Anti-Cancer Agents in Medicinal Chemistry Vol. 14, No. 7 (2014): 936–945.

# **New Product**

# Building Resilience

The addition of **Resilience**Mushroom Complex to our selection of premium hot water-extracted medicinal mushroom supplements was an easy decision. Formulating a blend of the entire selection allowed us to amplify the immune-enhancing and antioxidant properties they have in common while exploiting the "species-specific" benefits within each mushroom.

Equally important to the potent polysaccharides bound within the cell walls of the mushroom (fruiting body) and mycelium (vegetative mass) are their method of extraction. Hot-water extraction is the only clinically validated system for dissolving

the indigestible fibre called chitin that forms cell walls. Chitin, the same compound that gives lobster shells their strength, once dissolved is naturally removed with the water content to obtain standardized extracts of up to 40% that constitute **Resilience** Mushroom Complex. The result is a highly bioavailable and convenient delivery method of 400 mg of our broad-spectrum mushroom blend per vegan-friendly capsule. In addition, both independent scientific studies and all references from traditional Chinese medicine refer to hot water-extracted mushrooms in their research findings.

The betα-glucans (24%) and polysaccharides within **Resilience** Mushroom Complex collectively exert powerful immune system benefits; however, additional compounds including betulinic



acid in chaga, triterpenes in reishi, cordycepins in cordyceps, erinacines in lion's mane, and lentin in shiitake add their own unique health benefits.

The mushroom kingdom is steeped in folklore and mystery; what's exciting is the way current scientific methods and research are confirming the historical benefits of this fascinating life-force

# Meet the Full Family



#### Maitake

- · Immune health
- Hypoglycemic and antidiabetic

#### Lion's Mane

- · Supports cognitive health
- Promotes nerve regeneration

#### Reishi

- Energy and resistance to stress
- · Overall system balance

#### Shiitake

- · Antioxidant and wellness
- · Helps fight colds and flu

#### **Coriolus**

• Immunotherapeutic and radioprotective

#### Chaga

- Adaptogen
- Antioxidant
- · Immune health

#### **Cordyceps**

- Energy
- Libido
- · Stamina and endurance

#### Resilience

- · Increases energy
- · Resistance to stress
- · Antioxidant and wellbeing

# **Health Advice**

# Chronic Fatigue Syndrome

A Multifaceted Problem



by Philip Rouchotas, MSc ND

Chronic fatigue syndrome (CFS) is a complex condition characterized by profound fatigue that is unrelieved by rest and exacerbated by mental or physical exertion.[1] Associated symptoms include body weakness, muscle pain, poor immunity and frequent infection or enlarged lymph nodes, poor memory or cognitive function, headache, and insomnia.[1] Chronic fatigue is thought to affect up to four million individuals in the United States, and up to 85% of these remain undiagnosed.[2] CFS

occurs most commonly among women between the ages of 40 and 59 years.<sup>[2]</sup> The diagnosis of CFS is made primarily upon the constellation of presenting symptoms, and treatment of this complicated condition is often challenging.

The causes of CFS are multifactorial. Some of the hypothesized factors include infection, particularly viral infection such as Epstein-Barr virus (EBV);[3] immune deficiency or dysregulation; nutritional deficiencies: as well as exposure to stress and dysfunction of the hypothalamus-pituitaryadrenal (HPA) axis.[1] From a naturopathic perspective, we also assess for the potential presence of food sensitivities, which can be a source of ongoing immune dysfunction and chronic inflammation, and the possibility of hormonal problems including adrenal fatigue and subclinical hypothyroidism.

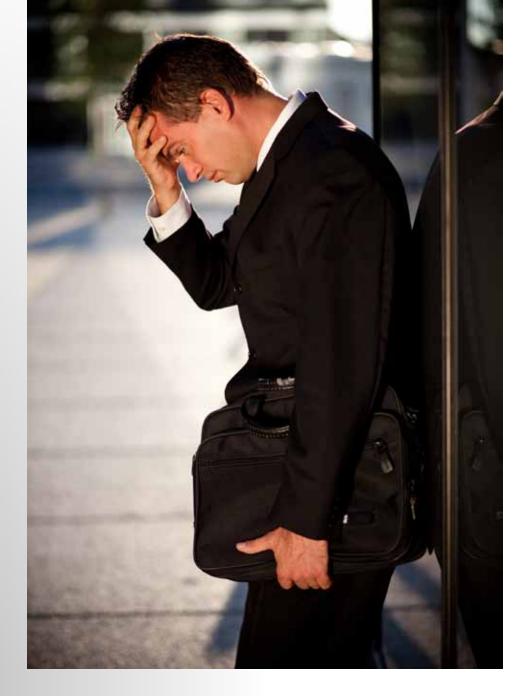
Conventional treatment options include cognitive behavioural therapy and pharmacologic management of pain, mood, and insomnia.<sup>[1]</sup> Gentle or graded exercise therapy may also be helpful.<sup>[4]</sup>

Naturopathic management of CFS includes assessing and optimizing nutrient status for such important nutrients such as the B vitamins, vitamin B<sub>12</sub>, vitamin D, iron, and magnesium.<sup>[5, 6]</sup> In addition to oral therapy, intravenous administration of magnesium, B vitamins, and vitamin C (known as the Myers' cocktail) has been shown to improve symptoms in patients with CFS.[7] Intravenous administration results in more rapid delivery and cellular uptake of these nutrients. Provision of nutrients that enhance mitochondrial production of ATP, such as acetyl-L-carnitine, may also be of benefit.[8]



Above and beyond nutrient optimization, a hypoallergenic diet and adrenal support are mainstays of the naturopathic approach to CFS. Individuals with CFS have been shown to have increased intestinal translocation of antigens from gram-negative bacteria, with subsequent gut-derived inflammation and induction of systemic inflammation. oxidative & nitrosative stress (IO&NS).[9] Treatment of this "leaky gut" defect through use of natural anti-inflammatory substances such as glutamine, N-acetylcysteine (NAC), and zinc resulted in significant symptom improvement. Similarly, removal of inflammation-promoting foods from the diet is key to healing leaky gut and stopping the consequent chronic immune activation.[10]

Finally, adrenal fatigue is a common underlying problem in individuals with CFS. HPA-axis dysfunction has been wellrecognized as problematic in these individuals; however, conventional approaches lack the ability to adequately treat this. Use of adaptogenic herbs such as ashwagandha, Siberian ginseng, licorice, and/ or rhodiola, as well as provision of essential nutrients including vitamin C and the B vitamins, helps to improve the adrenal's ability to produce cortisol appropriately.[11]



#### References

- Centers for Disease Control. "Chronic fatigue syndrome (CFS)." · http://www.cdc.gov/cfs/· Updated April 2014 · Accessed 14 March 2015.
- Allen, P.R. "Chronic fatigue syndrome: Implications for women and their health care providers during the childbearing years." *Journal of Midwifery and Womens Health* Vol. 53, No. 4 (2008): 289–301.
- Lundell, K., et al. "Clinical activity of folinic acid in patients with chronic fatigue syndrome." Arzneimittelforschung Vol. 56, No. 6 (2006): 399-404.
- Larun, L., et al. "Exercise therapy for chronic fatigue syndrome." Cochrane Database of Systematic Reviews Vol. 2: CD003200.
- Berkovitz, S., et al. "Serum 25-hydroxy vitamin D levels in chronic fatigue syndrome: a retrospective survey." International Journal for Vitamins and Nutrition Research Vol. 79, No. 4 (2009): 250-254.
- Antiel, R.M., et al. "Iron insufficiency and hypovitaminosis D in adolescents with chronic fatigue and orthostatic intolerance." Southern Medical Journal Vol. 104, No. 8 (2011): 609–611.

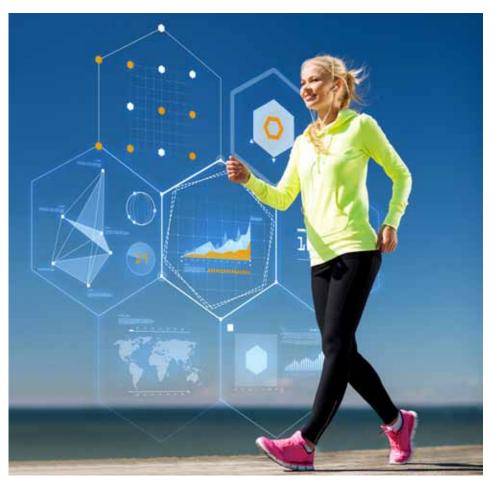
- Gaby, A.R. "Intravenous nutrient therapy: the 'Myers' cocktail'." Alternative Medicine Review Vol. 7, No. 5 (2002): 389-403.
- 8. Vermeulen, R.C. and H.R. Scholte. "Exploratory open label, randomized study of acetyl- and propionylcarnitine in chronic fatigue syndrome." *Psychosomatic Medicine* Vol. 66, No. 2 (2004): 276–282.
- Maes, M. and J.C. Leunis. "Normalization of leaky gut in chronic fatigue syndrome (CFS) is accompanied by a clinical improvement: effects of age, duration of illness and the translocation of LPS from gram-negative bacteria." Neuro Endocrinology Letters Vol. 29, No. 6 (2008): 902–910.
- 10. Isasi, C., et al. "Fibromyalgia and chronic fatigue syndrome caused by non-celiac gluten sensitivity." Reumatologia Clinica Vol. 11, No. 1 (2015): 56–57.
- 11. Prousky, J. "Mild adrenocortical deficiency and its relationship to: (1) chronic fatigue syndrome; (2) nausea and vomiting of pregnancy and hyperemesis gravidarum; and (3) systemic lupus erythematosus." Journal of Orthomolecular Medicine Vol. 27, No. 4 (2012): 165–176.

# **MCT Energy**

# Fast, Fun, and Functional

**MCT**Energy is a dynamic source of energy that can fill a nutritional niche for the energy demands of spring and summer. Sustainably sourced from non-GMO coconut. and palm oil, MCTEnergy is comprised of 55% caprylic and 44% capric fatty acids. Easily absorbed within the intestines, they travel directly to the liver for conversion to instant energy for the body and mind with minimal fat storage potential. Medium-chain triglycerides (MCTs) have a clinical history exceeding 50 years for therapeutic use as a key nutrient in both infant and geriatric formulas, as they're metabolized up to eight times faster than complex carbohydrates. The high concentration of caprylic acid can also prevent Candida overgrowth.

At approximately 100 calories per tablespoon (15 ml), the mild polarity and flavour of **MCT**Energy make it easy to take by the spoonful or as a versatile addition to soups, sauces, fruit



juices, smoothies, vinaigrettes, or baked goods. *Trans* fat-free, MCTs also do not contain wheat, gluten, dairy, yeast, or sugar, and are suitable for virtually everyone.

Perhaps the only limit to the ways **MCT**Energy can quench your healthy energy requirements is your imagination!



# Did You Know...

...that medium-chain triglycerides are employed for therapeutic use in ketogenic diets for children with difficult-to-control (refractive) epilepsy. This low-carbohydrate diet fuels the brain with fatty acids and ketones\* instead of glucose, which in turn reduces the frequency of epileptic seizures.

\*A byproduct of fatty acid metabolism used by the brain as an alternative to glucose.

# Critical Nutrient for Pregnancy and More

Folic acid in its biologically active form (L-5-methyltetrahydrofolate), is recognized as being among the most important vitamins for women leading to conception and within the initial trimester of pregnancy. Supplementing with L-5-methyltetrahydrofolate is beneficial, as many people have impaired activity of the enzyme that transforms regular folic acid to this active form that the body easily recognizes and exploits. Our formula also features vitamin  $B_{12}$  and  $B_{6}$  in the premium methylcobalamin and pyridoxal-5'-phosphate (P5P) forms that serve as cofactors for metabolic reactions throughout the body.

# L-5-Methyltetrahydrofolate

helps reduce the risk of neural tube defects during pregnancy. It also participates in the exponential growth of nerve cells and the metabolism of nutrients required for tissue formation during the crucial early developmental stages of pregnancy.

L-5-Methyltetrahydrofolate also participates in the metabolism of nutrients that drives energy production within the mitochondria of all cells; this



translates into better energy levels in general. Additionally, it reduces levels of the amino acid homocysteine. Elevated levels of homocysteine have been linked to injury to blood vessels that lead to hardening of the arteries (atherosclerosis). High homocysteine readings could also contribute to reduced blood flow to the brain and neurotransmitter deficiency. which can contribute to depression.<sup>[1]</sup> Since folic acid and vitamin B<sub>12</sub> lower homocysteine, they could have long-term benefits for those at risk of this debilitating condition.[2]

New Roots Herbal's **Active**Folic **Acid** is a critical supplement for a healthy pregnancy, along with other promising therapeutic applications.

### References

- Folstein, M., et al. "The homocysteine hypothesis of depression." The American Journal of Psychiatry Vol. 164, No. 6 (2007): 861–867.
- 2. Almeida, O.P., A.H. Ford, and L. Flicker. "Systematic review and meta-analysis of randomized placebocontrolled trials of folate and vitamin  $\rm B_{12}$  for depression". International Psychogeriatrics Vol. 27, No. 5 (2015): 727–737.



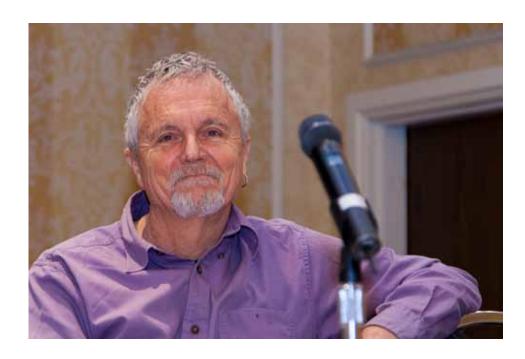
# **Non-GMO Conference**

# GMOs, Glyphosate, and Your Health



by Tanmayo Krupanszky, Conference Coordinator for the Canadian Organics Growers Toronto

Dr. Thierry Vrain is a man we need to listen to. He retired 10 years ago as head of biotechnology at Agriculture Canada's Summerland Research Station. Recently, he has been alerting people to the dangers to our health of glyphosate, the active ingredient in the herbicide Roundup, used with "Roundup" genetically modified plants or "GMOs," as they are known.



Dr. Vrain's most recent GE (Genetically Engineered) Tour across Canada highlighted many of the current studies about glyphosate. Most genetically engineered crops have been modified to resist the toxic impact of specific herbicides. Hence, only the plants engineered to withstand the herbicide survive and the

weeds are eradicated, solving a perennial problem of farmers. These crops account for a large majority of GMOs.

Dr. Vrain reveals that glyphosate has been indicated in many negative health impacts such as the destruction of intestinal flora, which has multiple consequences all over the body. These include compromised immune systems, altered brain function, and celiac disease. He also shows connections to liver or kidney damage and more. Glyphosate was recently listed by the World Health Organisation as a group 2A<sup>[1]</sup> chemical of concern due to "convincing evidence that glyphosate can cause cancer" and non-Hodgkin lymphoma. There is also the compromised mineral and nutritional content of food. Glyphosate binds with minerals such as calcium,



<sup>[1]</sup> Group 2A designates products "probably carcinogenic in humans."

iron, manganese, magnesium, and others, making them biounavailable, thus negatively impacting the shikimic acid pathway, a major metabolic information trunk. It inhibits enzymes, resulting in cell death.

Even more alarming is that Roundup is now applied routinely to non-GMO crops as a desiccant. It serves to dry out crops, like cereals, pulses (beans and legumes), and sugar cane right before harvest for easier handling and in the case of sugar cane, higher sugar content. Glyphosate residue can be found in every plant cell.

Dr. Vrain is one of a select few scientists willing to publicly voice concerns about GE, often at real personal and professional risk. The list of internationally renowned scientists whose careers have been damaged or destroyed for reporting adverse effects of GE include Arpad Pustzai and Susan Bardosc of Scotland, Ignacio Chapela of the US,

Gilles Eric Seralini of France, and Andres Carrasco of Argentina. In Canada, retired professor E. Ann Clark, who launched the organic major at Guelph, has spent close to 20 years speaking and publishing on the consequences of GE and GE regulation in Canada.

In most instances, the issues that GMOs are being developed to address could be mitigated, if not successfully solved, by alternative farming methods that enhance natural processes. The demand and efficacy of these products, in addition to their safety, have been questioned. Examples include golden rice and the new non-browning "Arctic" apple. This apple has just been approved here in Canada, much to the disappointment of the biotech watchdog, the Canadian Biotechnology Action Network (CBAN), many apple growers, and concerned citizens.

If you are interested in more detail about glyphosate and



the dangers to our health,
Thierry Vrain does a good job.
Not only does he clearly and
simply explain how glyphosate
works, he also raises some
serious questions about its
connection to other possible
health problems we experience
today. His GE Tour has been
recorded by Canadian Organic
Growers, and he has spoken
about his concerns at their
annual consumer conferences
in Toronto.

See his talk about GMOs and about glyphosate at https:// www.youtube.com/user/ OrganicGrowersVideo

# Did You Know...

At New Roots Herbal, we invest in Polymerase Chain Reaction (PCR) molecular biological analysis for definitive proof of non-GMO status of raw materials when necessary. This technique used in forensic science and paternity testing selectively amplifies single strands of DNA to reveal the genetic fingerprint of any substance down to the molecular level. Even Sherlock Holmes would be impressed!

# Step Up with Garcinia cambogia

Garcinia cambogia is a tropical fruit that contains a specific compound called hydroxycitric acid (HCA). This multitasking compound has definitely received plenty of hype; however, the important factor with its use is to manage expectations. The primary mechanism of action for HCA is to block the activity of the enzyme called citrate lyase, that converts carbohydrates to body fat. It also exerts positive effects on serotonin levels to



reduce appetite, improve insulin efficiency, and control cravings that can devastate weight-loss initiatives.

Everyone is familiar with the disclaimer that accompanies every weight-loss supplement that implies weight loss also depends upon reduced caloric intake and increased physical activity. Why not try some subtle changes for the better regarding diet and exercise? Then reward yourself with premium, high-potency New Roots Herbal GarciniaCambogia to accelerate

your progress or to advance from a stubborn plateau.

The positive effects that Garcinia cambogia exerts on your body and mind could help you avoid that midafternoon snack or caving in to a late-night carbohydrate craving. A couple of hundred unnecessary calories per evening alone

can be enough to derail and discourage even those of us with the best intentions and willpower.

Our Garcinia cambogia has been validated in our ISO 17025–accredited analytical laboratory for 60% HCA potency. When taken on an empty stomach three times daily before meals, it can give you the side effect-free, natural nudge to meet your weight-loss and fitness goals.



20

# Energize yourself with Hemelron

**Heme**lron is among the most recent additions to the New Roots Herbal product line. Iron intake requirements vary greatly depending upon age and gender, as well as menstrual and pregnancy status. In fact, iron is among the more polarizing minerals regarding its addition to foods, inclusion or exclusion in supplements, or whether it's safer to obtain sufficient iron through a healthy diet. It was not uncommon for doctors to recommend a pint of stout per day during pregnancy to meet iron demands!

Herbal's **Hemelron** is the best form of iron supplementation for a variety of reasons. It's the same polypeptide form found in red meat and poultry, which is easily recognized and absorbed by the small intestine. **Hemelron** also does not lead to the frequent side effects of constipation, cramping, and nausea often associated with elemental form of iron such as ferrous fumarate, sulfate, or gluconate.

Once absorbed, this highly bioavailable form of iron becomes the structural scaffolding for hemoglobin. This specialized protein within blood binds to oxygen within the lungs for use in cellular respiration throughout the entire body. Hemoglobin is also involved in returning  $CO_2$  from energy production within cells to the lungs for exhalation.

New Roots Herbal's **Heme**lron is formulated with a full spectrum of complementary nutrients. It contains vitamin C to enhance intestinal iron absorption, with the biologically active forms of folic acid (methylfolate) and vitamin  $B_{12}$  (methylcobalamin) included as critical cofactors for hemoglobin synthesis.

Our premium formula will energize every cell, tissue, and organ system throughout your body for better strength, stamina, and overall well-being.



# **Importance of Protein**

# Protein for Power



submitted by Joanna McDonald joannamedonald.ca

Keep your engine in tip-top shape this spring by giving your body the fuel it needs. Get the most out of all those wonderful activities you love; sleep better; develop a lean body and healthy muscles; and maintain a healthy body weight by regularly incorporating adequate protein into your diet.

Psst! It's here: the season we've all been waiting for! It's time to dust off those bicycles, tennis rackets, rollerblades, and get ready for a spring and summer of fun activities. While a lot of us may be off to the races as the days get longer and warmer, make sure that you pack along some protein-filled snacks to keep your body satisfied and nourished all day. Feeding yourself with sustainable, renewable protein energy will help you go further each day with the foundation of a champion!

# Protein is so important because it:

- helps to build and repair cells after injury, strain or sprain;
- increases brain function (including omega-3 fatty acids from some sources);



- · curbs appetite;
- provides vital nutrients to your body;
- reduces stress and provides restful sleep;
- may help to prevent certain diseases; and
- may increase the quality and longevity of your life.

### Where you can find it:

#### Nuts and Seeds

Try walnuts, cashews, Brazil nuts, peanuts, almonds, chia seeds, flax seeds, sunflower seeds, or pumpkin seeds. Almond, rice, or coconut milk are great choices in smoothies...

# Eggs

Try boiled eggs for a quick "on-the-go" snack.

Legumes, Grains and Beans Beans, wild rice, quinoa, and lentils make a excellent choice for summer salads, soups, snacks,

and dips.

Lean Fish and Meat Grilled, poached, barbecued, baked, or stir-fried; there are thousands of ways to dress up old favorites such as cod, sole, chicken, beef, or salmon.

# Cheese and Yoghurt

Cottage cheese and yoghurt will do the trick for a light bite!

# Prepared Protein Powders

Pre- or postworkout, these may be suitable for you.

# How much do you need?

With a lot of conflicting information out there, it may be hard to discern what is best-suited for your body type. Your favorite health-care provider and specialty health-food store representatives may be able to help you find the right amount for your body type and present health state, or if it's suitable for you to take a supplementary protein product.

Here's to your health; it starts with you! Even small changes make a big difference, so remember to feed yourself well; you deserve it.

# **Culinary Corner**



Photo copyright Joanna McDonald 2015

# Peanut Butter & Banana Protein Bites

Here's a delicious recipe Joanna sent us to fill your needs in protein when on the go, at home, or at the office.

# Ingredients

- 1 c. of rolled oats
- 4 tbsp. of peanut butter (or almond butter)
- 2 tsp. of chia seeds
- 1 tsp. coconut oil
- 2 tbsp. of agave syrup (honey)
- ½ a ripe banana
- ½ c. chocolate chips
- 2 tbsp. shredded coconut

#### Instructions

Combine all ingredients, except chocolate chips and shredded coconut, in a food processor. Pulse ingredients until they form a light paste. Transfer mixture to a mixing bowl. With a wooden spoon, gently fold in chocolate chips. When combined, gently roll into small balls. Take each ball and roll in shredded coconut to coat. Place balls in an airtight

container and store in freezer until ready to use. Protein bites will last in the freezer for up to three months.

Makes 2 cups or 24 bites.

# Creamy Carrot & Ginger Soup



Photo by Alejandra Aguirre

submitted by Theresa Nicassio yumfoodforliving.com It was a long-standing dream of mine to make a soup like this. Once I managed, it was even more incredible than I had hoped! In devising this recipe, I was committed to making it supersimple, so when I had the brainstorm to roast roughly chopped vegetables, I got really excited. I also love that I found a way to use cilantro stems, which otherwise end up in the compost. This soup is sure to be a crowd pleaser, filled with ingredients that most people have on hand, and that even those with allergies and autoimmune conditions are able to eat. The only problem is that it doesn't last long; if you want to have leftovers or if you will be serving guests, you might consider doubling or tripling the recipe. If you do so, you'll need to blend it in batches.



## Ingredients

- 2 c. carrots, roughly chopped
- 1 small or medium yellow onion, roughly chopped
- 2 celery stalks, roughly chopped
- 2-3 garlic cloves, halved
- ¼ c. green onions, chopped
- 2 tbsp. extra virgin olive oil
- 1 can (14 fl. oz. or 400 ml) premium full-fat coconut milk
- ¼ c. cooked chickpeas
- 2 tbsp. cilantro stems, roughly chopped
- 4 tsp. lemon juice, or to taste
- 2 tsp. grated ginger, firmly packed

- 1½ tsp. white vinegar
- 1 tsp. Himalayan salt, or to taste
- ¾-1 tsp. dried dill, or to taste
- ½ tsp. ground cumin
- ½ tsp. black pepper
- 1/4 tsp. curry powder
- ½ tsp. garlic powder
- ½ tsp. cinnamon

#### Instructions

Place the carrots, onion, celery, garlic, and green onions in a large baking dish. Drizzle with the olive oil and stir to coat evenly. Bake in an oven preheated to 315 °F for 45 minutes.

Before the vegetables are done baking, purée the rest of the ingredients with water in a high-speed blender, using the coconut milk can to measure the water. Then, add the roasted vegetables and purée again until smooth and creamy.

Serve warm directly from the blender, or refrigerate for a chilled soup. This freezes well and can be gently reheated for future quick meals (don't overheat).

Makes 5 cups.

# Sacramento Summer Salad



submitted by Gord<u>on Raza</u>

This sultry, smoky, and succulent salad presents well in a Mason jar for a healthy meal on the run, or as a great side for Cajun salmon or Tuscan grilled chicken.

# Salad Ingredients

- 2 c. spinach greens, chopped
- ½ c. yellow pepper strips
- ½ c. halved cherry tomatoes
- ½ c. smoked almonds\*, diced
- ½ c. shredded carrots
- ½ c. julienned green onions
- \*Approximately 300 calories per  $\frac{1}{3}$  of a cup

# Vinaigrette Ingredients

- 2 tbsp. MCT Energy\*
- 2 tbsp. balsamic vinegar
- ½ tsp. Dijon mustard
- 1 clove garlic, finely diced
- ½ tsp. sea salt
- ½ tsp. freshly ground pepper
- \*Approximately 100 calories per tbsp.

#### Instructions

Whisk together ingredients.

Makes 2 portions.



# Vitamin E<sup>8</sup>

# Compound Interest

It seems the further down the alphabet a vitamin gets its initial from, the less we tend to know about it. Vitamin E is a great example: it's a family of eight specialized, fat-soluble compounds with an interesting résumé of biological activity critical for excellent health. Although the *alpha*-tocopherol form is the most active form in humans, the complete synergistic strength of the alpha, beta, delta, and gamma forms of both tocopherols and tocotrienols broadens the therapeutic range of this versatile vitamin.

Vitamin E supplementation delivers potent antioxidant properties for protection from

many age-related degenerative diseases, including antitumour activity and interfering with the early stages of atherosclerosis (hardening of the arteries). Strong immune-system performance and healthy skin and eyes are also among the many benefits of vitamin E supplementation. Research performed by the Department of Surgery of the Ohio State University has also shown promising results for tocotrienols for decreasing neurological damage in stroke victims. Tocotrienols have been shown to activate an emergency response system, where smaller blood vessels irrigate the brain with oxygenated blood during blockages to larger arteries that cause strokes.

It's amazing how vitamin E can strengthen resistance to such a broad scope of disease and illness. Vitamin E destroys freeradical molecules that damage cell membranes via a process called lipid peroxidation. Lipid peroxidation is the destructive force where electrons are stolen from the protective lipid layer of cell walls, leaving them unstable and prone to disease. Simply put, vitamin E protects cells throughout the entire body, and healthy cells translate directly to better health.



# Visit Us on Facebook!



Visit our Facebook page for product updates, event information, original culinary creations, and compelling articles featuring the latest trends in health and wellness. Connect with us, and we'll stream you the latest news in our industry. Facebook is an exciting, modern-day "word-of-mouth" way to communicate, and we're excited to share and grow with you.

# unicef canada

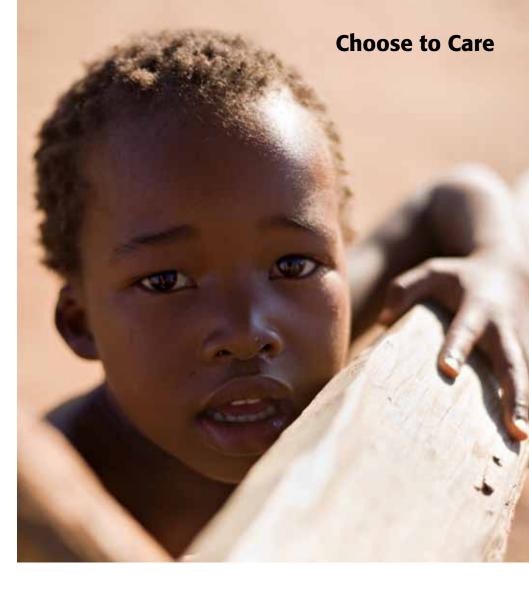
Children's survival and well-being are the main objectives of one of the most well-known charities worldwide — the United Nations Children's Fund (UNICEF)<sup>[1]</sup>. Regardless of the race, colour, and religion of a child in need, UNICEF has always been keen to offer tremendous support to them

Creating a promising future for children worldwide has always been the goal of UNICEF, and that is why such a reputable organization has been initiating many children-related programs. Such programs are designed to improve the children's quality of living, their development and education, to protect them from diseases, and eliminate any child exploitation.

At New Roots Herbal, we have always been excited to

[1] Originally and until 1953, the United Nations International Children's Emergency Fund, hence the acronym.

Other Supported Organizations



support an organization such as UNICEF. Our Choose to Care program gave us the chance to show children in need that we are here to support them and to help them have a better future, regardless of where they are located in the globe. Moreover, the importance of our support

to UNICEF is that it also raises the awareness among our customers about the valuable and life-changing efforts that UNICEF is exerting to make children enjoy their childhood and dream of a promising future.





















<sup>© 1986</sup> Panda symbol WWF-World Wide Fund For Nature (also known as World Wildlife Fund). ® "WWF" is a WWF Registered Trademark.

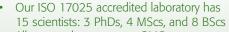
# The first step towards your child's wellbeing

**Prenatal** is a comprehensive formula containing 24 vitamins, minerals, and nutrients essential for proper fetal development and maternal health before and during pregnancy and while breast-feeding.



Prevention & Cure® since 1985





All our products are non-GMO



