the PULSE

ISSUE NUMBER 48
FALL 2007

Kicking Off OANDs Unity Year at Convention 2007

by Shelley Burns ND
Chair, OAND

This year's convention opened with a panel discussion on the Future of Naturopathic Medicine in which seven panelists (all offering diverse practice styles) expressed their views about the route Naturopathic Medicine should take in Ontario. This event allowed for an interactive discussion of "next steps" as we prepare to move under the Regulated Health Professions Act (RHPA).

As I listened to each panelist, I developed a collage of words summarizing how participants view our profession. This is what I heard:

Language
Transition
Use it or lose it
Principles
Blueprint of health
Professional
Touch
Unity
Teaching
Illness as personal transformation
Primary care
Change
Solution
Leaders
Insight
Mentoring
Responsible
Practical guidance

These are very powerful words that speak clearly to the direction the OAND needs to take when working with the Transition Council who will be developing regulations and standards for the profession.

On behalf of you, the membership, the OAND is committed to ensuring we move through transition and into the RHPA with a full scope of practice, to position ourselves as primary health care providers and to speak the language of medicine while remaining grounded in our principles and philosophy. To this end we are launching a strategy to engage members in discussions that bring us together as a unified profession.

We have an ambitious agenda ahead of us. It is critical we remain united as a profession in our thoughts, ideas, and values in order to make our journey a success. What does "unity" mean for us at this time? It means remaining cohesive and consistent with our messaging to the government, respecting that we are an eclectic profession, preserving all of our modalities, and maintaining respect within the profession.

It is clear from discussions heard during the OAND Convention that we remain committed and passionate about who we are first and foremost – Naturopathic Doctors. No one can take this away from us but US. I encourage members to continue to ask questions, challenge the status quo and engage in conversation with colleagues. Now is not the time to be isolated. I also encourage you to check-in with the OAND if you have ideas, suggestions or want to become involved in shaping the future of Naturopathic Medicine. We are your voice and resource, so use us!

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OAND Events

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December 3 - Hygiene Hypothesis with Philippa Heritage PhD, McMaster University, Hamilton, 7:00 pm to 9:00 pm.

January 23 - Primary Care Series, CCNM, Toronto.

January 24 - 27, Parenteral Therapy Certification, Toronto.

January 29 - Energetic Remedies in Natural Medicine with Anthony Godfrey ND, Toronto.

February 20 - Primary Care Series, CCNM, Toronto.

March 19 - Primary Care Series, CCNM, Toronto.

March 27 - PT Updates Course, Toronto.

March 28, 29 - 2 (6 hour) Emergency PT Courses, Toronto.

April 16 - Primary Care Series, CCNM, Toronto.

April 19, 20 - OAND Cardiology Conference, Oakham House, Ryserson University, Toronto.

May 14 - Primary Care Series, CCNM, Toronto.

June 11 - Primary Care Series, CCNM, Toronto.

July - Botanical Walk with Anthony Godfrey ND. Date TBD.

September 18, 19 - Business Symposium, Ryerson University, Toronto.

October 17, OAND Unity Summit, Sheraton on the Falls, Niagara Falls.

October 18, 19 - OAND Convention 2008, Exploring the Foundations of Naturopathic Medicine, Sheraton on the Falls, Niagara Falls.

November - FREE CE Event, Perinatal Naturopathic Medicine, Clinical Pearls with Lisa Doran ND, Toronto. Date TBD

OAND Ontario Association of Naturopathic Doctors
the voice and resource for Naturopathic Doctors

CONTINUING EDUCATION

CALL FOR ADDITIONAL WORK GROUP MEMBERS

Duration: Ongoing, commencing immediately. Membership is for a two-year term.

The OAND Continuing Education (CE) Program strives to offer members innovative, high quality continuing education as well as the opportunity to achieve the required CE credits as stipulated by our regulator. As a member-responsive organization, our programming is developed by naturopathic doctors (NDs) and is informed by the suggestions we receive from members.

The Continuing Education Work Group plays an integral role in ensuring that the OAND CE program meets members' needs by developing the OAND's CE strategy and determining the speakers and topics for the program.

The Work Group meets approximately four times annually, with additional meetings as required. Meetings will be no longer than two hours and, for the most part, will take place via teleconference.

Mandate: To provide expert guidance and advice on Continuing Education Programming

Work Group members review presentation proposals and suggestions from members, and provide input to help determine continuing education programming content. Where needed, members will be required to contact speakers to help define the presentation topic area.

Program development includes determining speakers and topics for the following OAND events: Annual Fall Convention, Spring Clinical Focus Conference, seminars and other intensive courses.

Position Requirements: Members must be professional members of the OAND with continuing education experience that includes a breadth of modalities, pharmacology and jurisprudence.

CE Credits: As a member of the OAND Continuing Education Work Group, you may be eligible to receive up to 3 Continuing Education credits.

For additional information or to find out how to volunteer please contact Kim Appleton, Program Manager, Member Services by phone 416-233-2001 ext. 25 or email membership@oand.org.

OANDs 2008 PRIORITY – UNIFYING THE PROFESSION IN ONTARIO!

by Alison Dantas, CEO, OAND

As outlined in Shelley Burn's article in this issue of the Pulse, the OAND Board has identified through consultation with members that there is a need to continue to reach out to members and to engage them in discussions about who we are as naturopathic doctors and how our scope of practice should be defined. The commitment among the NDs on the Board is to facilitate and lead the profession through transition in a unified fashion, bringing together the diversity of voices in our membership and positioning ourselves as strong partners in the health care system.

The strategy that we will be implementing over the next year has already begun with the Convention Kick-Off Event entitled, "Celebrating our Roots, Forging our Future: An Interactive Session on the Future of the Profession". Over the next year, we will be working with members to continue the discussions through the use of the *PULSE*, member updates, and member meetings around the scope of practice and the implications of being regulated under the Regulated Health Professions Act (RHPA). We encourage you in your own communities to begin to engage in discussions with each other about the importance of maintaining the principles and philosophy of naturopathic medicine while finding ways of collaborating and partnering with other regulated health care providers.

We ask that you contact us at the OAND office and let us know your ideas, concerns, and/or excitement about opportunities that naturopathic doctors can take advantage of as we embark on the transition process under the RHPA.

The unification strategy will come to a conclusion in 2008 at the OAND Convention where we are planning to hold a full day "Unity Summit" on the scope of practice and the brand we want for naturopathic medicine in Ontario. We ask that you mark your calendars for October 17-19, 2008, as we want to host as many of you as possible at the summit which will be held at the Sheraton on the Falls in Niagara Falls.

The staff and board of the OAND are committed to achieving the Unity Strategy, but we cannot do it without your participation. The OAND is a reflection of you, our members, and we invite you to get connected with your colleagues, engage in the activities we have planned to reach out to you and most of all remain passionate about the profession that can change the state of health in Ontario! The public is poised to use naturopathic medicine to improve their health and now we have to rise to the challenge by creating a clear message about who we are and what we have to offer as part of the regulated health care providers under the RHPA!

To find out more about the OAND Unification Strategy/ OAND Programs/Services and the 2008 Strategic Plan Contact;

Alison Dantas, CEO
T: 416-233-2001, ext. 23
E: adantas@oand.org

To find out more about regulation under the RHPA/ Transition Council contact;

Michael Heitshu,
Director of Policy
T: 416-233-2001, ext. 27
E: policy@oand.org

The RHPA - What does it all mean?

by Tara Gignac ND

The OAND convention this year kicked off with what I think was the most important part of the entire weekend: the open panel discussion on the future of Naturopathic medicine in Ontario. This was an opportunity for us as individuals to understand what is going on with respect to our inclusion in the Regulated Health Professions Act. At the beginning of the event I had a very rosy idea of what is going to happen as we change how we will be regulated. By the end of the event my idea was still rosy but a few really big "smudges" emerged.

So what are these big "smudges"?

The first one is apathy. As a profession, in every single survey done by the OAND, we have stated that becoming part of the RHPA is of utmost importance. We have been working on this for over 10 years. We finally get the Naturopathy Act given royal assent. We are on our way to "barking with the big dogs" and 50 people show up to talk about it. 50 people!!!!! This is the biggest thing to happen in our profession since it started and 50 people show up – what's going on here?

As a naturopath, I look for the root cause of this apathy and one reason comes to mind - lack of understanding of what it all means (which was one of the reasons I showed up at the Friday night event).

Here's what's happened so far: The Naturopathy Act, part of bill 171 was given Royal assent. Within this document we received title protection as well as access to all the controlled acts we currently practice with. On the surface it all sounds good. Things will be the same as always, we just get to call ourselves doctor now right? Well, the answer is maybe.

Here's what happens next: a group of people appointed by the Ontario Government, which will include ND's, but also MD's, pharmacists and chiropractors, will get together and decide how we are going to be allowed to use our controlled acts. They will develop the regulations, or rules under which we practice with the intention of securing "public safety". This is a really big deal and one that we should all be watching with extreme interest and attention to detail. Sure, we have the controlled act of delivering a substance by injection, but if the regulation is written such that you are only allowed to give a B12 shot when the serum level of B12 is X points below normal, your present practice may be significantly limited. And that's one small example – these details need your attention as they are being worked on. Don't be apathetic. Read all emails from the OAND and comment on them. Be involved and stay informed!

The next big smudge is really what I call "the same old thing". Naturopathic Doctors are an eclectic bunch. It's one of our strengths, but historically has done a good job of getting us into trouble as well.

Anthony Godfrey ND and Jason Lee ND spoke beautifully and poignantly at the conference about the importance of knowing who we are and the true focus of what we do. Our ability to look at the whole person and find the root cause, tap into the vis naturae, and then teach them about their bodies and what they can do to prevent further imbalance or disease is really what being a naturopath is all about. This is why we all get out of bed in the morning. This, at its core, is who we are.

The challenge is that as individual practitioners we focus on the importance of the modalities we use and negate the importance of the modalities we don't. This focus on "modality of treatment" has been the root cause of much of the in-fighting within our profession for decades.

Using a personal example, presently I do not use body work, or TCM in my practice. I have no personal interest in them and I have made effective connections in my community with respect to practitioners who specialize in these modalities. As the transition council is going through the legislative process and there is a question of limiting the use of either of these two modalities, I could be apathetic about it and think, "well, it won't effect my practice", or even worse because I don't use these modalities I could argue that they are not "naturopathic" at all. However, I do use a lot of counseling and parenteral in my practice. If there was a question of limiting the use of these modalities it would very much affect my practice and I would go to the mat with anyone who argued that I was a "green allopath" or any less naturopathic because I use them. The point is that the strength of our profession lies in the entire profession's access to these modalities, regardless of individual use.

The second part to this "modality" story, and one that I'm not sure is on the radar of many NDs is that limiting the use of our tools in any small way then limits the ability of us as business people to grow and expand our practices. To build on the personal example, I don't use TCM right now, but if the professional I work with left the community, there would be a gap in the market that my skill set could fill. If I didn't want to do acupuncture myself, I could invite another ND into my practice to fill the need. If the use of that modality is limited, then I lose that opportunity to grwo my business, the chance to offer a practice opportunity, and a choice for patients to access a well established healing tool – how is that for "public safety"?

As Jim Spring ND so perfectly stated - they can't legislate how you think and approach a patient, but they can sure limit the tools with which you can assist them on their paths to heal.

I urge each ND in Ontario to inform themselves, to engage with the OAND and to be a part of the transition process. Building our unity and working to protect ALL the tools we use to assist our patients is critical.

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MEMBERS IN THE MEDIA

John Dempster ND
Flare September 2007

Readers received some sound advice from John Dempster ND regarding seasonal detoxes.

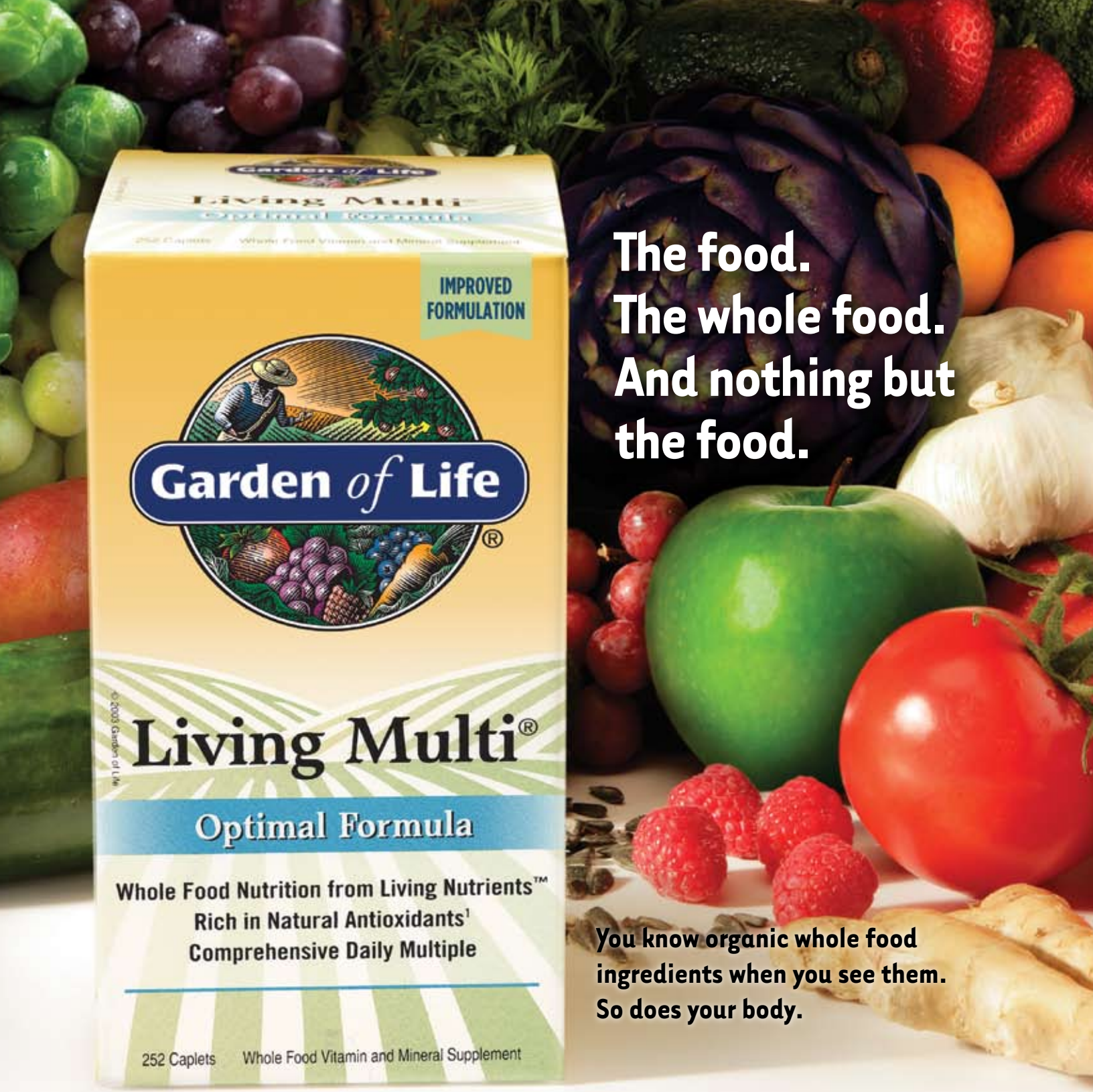
Nora Pope ND
National Post - October 2, 2007

Nora Jane Pope ND provided National Post readers with some great advice about 'charting', an alternative method of birth control that's both eco-friendly and kinder to the body than some conventional methods. Nora has lectured on 'eco-friendly birth control' as part of Naturopathic Medicine Week for the past three years.

David Lescheid ND
In Depth Health, Vitamin D - Ways to get your dose in winter
By Georgie Binks,
CBC - November 15, 2007

David Lescheid, ND explains, "There are two forms of supplemental vitamin D. One is called ergocalciferol and one if cholecalciferol. The second one is what you want to take; otherwise you don't get the benefit of it. That's important because we see an incredible number of people who are vitamin D deficient – about 80 per cent of Canadians in the winter."

If you're getting media coverage please let us know. Contact Ronda Parkes, Program Manager, Marketing and Publications, ronda@oand.org or 416-233-2001 ext. 28.



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by Health Care Financial Group

Tax is only one aspect to your finances. To put it all into context, we consider financial planning like going on a hike...

The first step is determining your life-goals - we call these your View-Points. We need to know where want to go before we can map out the right trail to get you there.

The second step in our process is Cash-Flow Management. Similar to packing water, this is managing how money flows in and out of your accounts (debt-management, tax-planning and personal spending). Keeping yourself well hydrated is having more money coming in than draining out.

Your First-Aid Kit gets you out of trouble by providing resources when they're needed most and is the third step in our process. Insurances, emergency savings and good credit are found here.

The fourth step is packing your Day-Pack which holds investments for shorter term goals: saving for a down payment, kid's education, business, travel, etc. These investments protect your capital and provide liquidity.

The last and biggest pack is your Retirement Backpack. Use time to your advantage and pack early – this pack needs to be large enough to fund all your retirement years.

Below are some ideas to help tighten your tax-drain, thereby increasing your savings!

A few changes to the tax-act for this year's filings:

A) A non-refundable $2,000 child tax credit will apply for each child that you have under 18. This will provide tax relief of $310 per child.

B) Tax credits for low-income spouses (or common-law and same-sex partners) will increase to $8,929 from $7,581. Proving $209 of tax saving for a supporting spouse or single taxpayer who is supporting a child or relative.

C) Buy a fuel-efficient car and receive a rebate up to $2,000.

D) Charitable donations of publicly listed shares to private foundations will be free from capital gains tax.

E) The $4,000/year annual contribution limit to your children's education plans (RESPs) has been eliminated and replaced with a lifetime limit of $50,000 (from $42,000).

F) RSP contributions will be able to continue to age 71 (up from 69).

G) Increasing the threshold for small business income eligible for the reduced federal tax rate from $300,000 to $400,000.

Other Year-End Tax-Tips that haven't gone out of fashion:

1) Defer purchasing a non-registered fund until January 1st to avoid 2007 distribution taxes. If planning on selling, do so before distribution dates.

2) Selling capital losses can offset capital gains.

3) Maximize your RSPs and start as young as possible. If you don't need your RSP deduction, you can still shelter your money and claim the deduction in future when your tax rate is higher. Get a bigger bang for your RSP buck.

4) If you are over 71, but your spouse isn't, you can still make a contribution to his/her plan if you have RSP room.

5) RSP contributions can be made until March 1, 2008; however, if the beneficiary of the plan turned 71 in

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CONTINUING EDUCATION SERIES

OAND Ontario Association of Naturopathic Doctors
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CONFERENCE 2007

TARGETING CANCER VIA PHYSIOLOGICAL WEAK POINTS

Presenter: Dugald Seely ND

Saturday, April 21, 2:45 pm – 3:45 pm
Holiday Inn on King, Toronto, Ontario

CE Credits: 1 Pharmacology

Reviewed by Joetha Stoddard ND

As Naturopathic physicians, our exposure to patients undergoing treatments for cancer is on the rise, and we must have a thorough understanding of conventional therapies and the potential interactions with our natural health products (NHPs) in order to safely and effectively manage the care of our patients. From an evidence-based perspective, one of the key areas of clinical interest in the management of cancer includes using NHPs to target the unique and vulnerable characteristics of cancer physiology. However, the concurrent use of NHPs and conventional cancer therapy raises some concerns about potential interactions, which need to be addressed.

In the initial section of the presentation, all aspects of cancer physiology were outlined. Topics reviewed included cancer development, tumor progression, genetic instability, tumor anatomy, and the role of chronic inflammation in carcinogenesis. The acquired capabilities of cancer were briefly outlined, with specific emphasis on metastatic and angiogenic pathways. In short, metastasis requires a number of steps, has a large number of barriers/requirements (ten were listed), and therefore has physiological weak points which can be targeted.

In the second section of the presentation, we explored the use of NHPs in cancer. It is key to understand that anti-cancer NHPs have a variety of modes of action and contain a great number of complex compounds with synergistic effects. However, in the management of cancer, it was suggested that our current efforts may be best served by focusing on the NHPs able to target the metastatic and angiogenic pathways. Topics covered in depth in this section included the physiological weak points/targets, research and evidence for NHP use, pharmacology with respect to dosage, safety, pharmacokinetics and chemotherapy interactions of melatonin, green tea or epigallocatechin-3-gallate (EGCG), and modified citrus pectin (MCP). Further investigation is required for NHPs such as curcumin, viscum album, resveratrol, quercetin, zingiber officinale, panax ginseng, milk thistle and berries.

In the final section, we explored the potential interactions between NHPs and conventional cancer therapies, and discussed the concerns of medical oncologists. Outlined were the various areas of concern for use of NHPs with conventional cancer therapy. Topics discussed included the Antioxidant Debate, oncologists' concerns regarding concurrent use of NHPs and chemotherapy, cautions due to altered absorption rates, altered functioning of metabolic enzymes, and a strategy to control the interactions. We covered the "Antioxidant Debate", in which one side contends antioxidants may interfere with pro-oxidant action of chemotherapy, while the other contends there is evidence that certain antioxidants are beneficial in protecting against chemotherapy damage. We reviewed the patterns of administration of NHPs in conjunction with chemotherapy and the potential likelihood of interaction and negative outcomes. Key to this was the concepts of half-lives, clearance time, and metabolic enzymes involved/affected. The key strategy in reducing the potential for interaction between NHPs and chemotherapeutic agents is to discontinue administration of NHPs and wait five half-lives (approximately 2 to 3 days) prior to beginning administration of chemotherapy. The same is true for resuming NHP administration: wait until 5 half-lives of the drug has elapsed, before resuming NHP administration. In the case of NHPs that may affect relevant metabolic enzymes, greater caution should be exercised, and use of the NHP should be avoided altogether if the NHP is known to affect the enzyme involved in clearing the chemotherapy drug. Finally, in cases where cure is likely with conventional therapy, exercise caution and allow the chemotherapy to do the job.

Overall, I believe Dr. Seely did an excellent job of clarifying a topic that can be overwhelming and confusing at best, by providing concepts and understanding that will assist us in our approach to managing our cancer patients, instead of a basic formula for curing a disease. As naturopathic physicians, prevention is still our strength! Most importantly, when we step back and look at the broader picture, patients are still people and it would be of great benefit to them if we respected their wishes to combine therapies, while being willing and capable of working together with the rest of their healthcare team! To do this, we must strive to gain a better understanding of the physiological weak points of cancer and the interaction between the various types of medicine, and apply what we've learned with wisdom.

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2007, contributions must be made by December 31, 2007.

6) All donations should be claimed by one spouse to maximize donation credits. Consider donating securities for better tax treatment.

7) All medical expenses should be claimed by the lower income-earning spouse to maximize medical tax credits. You can use any 12 month-rolling period, not necessarily Jan-Dec timelines.

8) Deductions for home office, meals & entertainment and vehicle are possible for employees, if a 'Conditions of Employment' form is applicable.

9) RESP contributions must be made before December 31st if your child turned 17 this past year.

10) Income split wherever possible. Equalize current and future incomes.

11) Beware of tax-shelter donation arrangements and gifts of property.

12) A big, fat tax-refund is a bad thing! Complete a T1213 form, reduce your tax withholdings and increase your monthly cash-flow.

13) Best to borrow only for investment or business purposes (and to buy your home). Otherwise, pay in cash only – don't debt finance for personal spending. Debt swap to deduct interest wherever possible.

14) With our rising dollar, consider converting your US accounts into Canadian currency to claim currency losses against past, current or future capital gains (check with superficial loss rules if you are planning on converting the currency back into US-dollars).

15) Meet an accountant or CFP now to arrange your affairs in the most tax-efficient manner – don't wait to ask 'how did I do last year'!

As a friend of ours once said, "It is fine to pay your taxes, but you don't have to leave a tip!"

Bradley Roulston, CFP and Brian Shumak, CFP

Contact info@hcfinancialgroup.com or call (416) 907-4595 for more information.

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Parenteral Ascorbic Acid and Cancer

by Eric Marsden ND

Introduction

Vitamin C or Ascorbic Acid (AA) was first implicated as an anti-cancer agent through the research of Dr. Linus Pauling PhD and Dr. Ewan Cameron MD. Their first clinical trial began in 1971 and the results of this and other research were published in the book, "Cancer and Vitamin C" in 1979. In their clinical trial, they found a four-fold increase in survival time by those individuals treated with 10,000 mg of AA intravenously.[1] A later trial done by the Mayo Clinic could not repeat these findings, leading to a dismissal of AA's potential role in Oncology. Dr. Pauling's subsequent work in this field led to him being widely criticized as a "quack". Due to his ongoing research and years of anecdotal evidence from naturopathic and medical doctors alike, there is a renewed interest and research into high doses of AA. The goal of this article will be to summarize the data rationalizing high dose intravenous AA use in cancer.

Intravenous Ascorbic Acid vs. Oral Administration

Oral AA is absorbed through the intestinal lumen in an energy and dose dependant process. AA is absorbed by enterocytes predominantly in the dehydroascorbic acid (DHAA) form due its more rapid membrane transport. After entry into intestinal epithelium, DHAA is quickly reduced back to AA. At typical dietary levels (i.e. 30 mg/day), AA is almost 80-90% absorbed.[2] At increasing oral dosage levels, there is a significant reduction in absorption. Results showed that oral dosing of 2 g resulted in less than 40% absorption.[3] This reduced absorption of AA at high doses leads to the osmotic laxative effect observed in patients receiving high dose oral AA therapy.

One pharmacokinetics study by Sebastian et al. demonstrated individuals receiving higher dietary levels of 200 mg AA daily showed plasma concentrations of approximately 90 µmol/L. Maximal plasma levels of 200 µmol/L were achieved through oral dosage of 1.25 g. That same 1.25 g dosage given IV achieved a threefold greater plasma level. Increased oral supplementation of 3g AA every three hours six times per day showed plasma concentrations plateau at 220 µmol/L. Finally, in the same study individuals were given a single bolus Intravenous AA dose of 100 g (250 mg/min) leading to peak plasma concentrations of 13,400 µmol/L – a seventy fold increase over maximal oral dosing levels.[4] Hence, for maximal AA concentrations, one must use IV administration to overcome bowel absorption limits.

Proposed Mechanisms of Anti-tumor Action: Selective Cytotoxicity

In a recent article by Chen et al., published in the Proceedings of the National Academy of Sciences, researchers looked to determine whether AA exhibits cytotoxicity and if so, to elucidate the mode of action of that cytotoxicity. Their in vitro research showed that some tumor cell lines were more susceptible to AA mediated cytotoxicity. The most sensitive cell line was Burkitt's Lymphoma, with colon cancer cells exhibiting the least sensitive response to AA. In this study, the researchers found that the cytotoxic effect was eliminated by the addition of oxygen free radical scavengers into the tumor milieu, indicating that AA cytotoxic action was mitigated through the production of oxygen free radicals. The researchers then compared the cytotoxic activity of H2O2 and found it similar to that of AA. Finally researchers were able to show that AA generates H2O2 in a dose dependent fashion through the ascorbate radical ion. This conclusively shows that AA's cytotoxicity can be attributed to the formation of H2O2. Researchers went on to demonstrate that the presence of free radical scavenging enzymes like catalase and glucose 6 phosphate dehydrogenase (G6PD) prevented the peroxide generating effect from occurring in the blood. Tumor cells are known to have low levels of catalase and therefore are more susceptible to toxic effects of the ascorbate radical. The levels of AA required to generate this effect could only be achieved through parenteral administration. [5]

There are some significant limitations to this proposed cytotoxic effect. In research conducted by Riordan et al., the cytotoxic effect of AA was limited by the density of tumor model that was being studied. In addition, they postulated that the tumor utilization of AA for stromal structure metabolism may also impact the cytotoxic effects of the treatment. As with any chemotherapeutic, effectiveness of AA is governed by delivery to the tumor.[6]

Proposed Mechanisms of Anti-Tumor Action: Stromal Stabilization

The role of AA in the formation of collagen and the regulation of the ground system is well known and is the reason why AA is so important in wound healing. AA exerts its effect by modifying the expression of various enzymes, including collagenase, MMPs and hyaluronidase. These enzymes are critical for the invasive potential of tumors as their increased activity results in the dissolution of the

ground matrix around a tumor. By inhibiting their activity, AA helps to stabilize the tumor stroma and reduce further cancer spread. One study by Riordan et al. confirmed that AA increased tumor cell production of collagen in a dose dependent fashion.[5] This, the researchers said, has a "gluing" effect on tumor cells, preventing spread of the disease. In another study, AA was shown to inhibit MMP2 and 9 which are known agonists in the angiogenetic cascade.[7,8]

Proposed Mechanism of Anti-tumor Action: Chemosensitizing Agent

One of the major criticisms of AA therapy was that as an anti-oxidant, AA may inhibit the chemotherapeutic action of various drugs used in conventional chemotherapy. The previous discussion regarding the ascorbate radical ion's potential to generate H2O2 and create free radical damage within a tumor cell would certainly indicate that high dose AA could actually potentiate the action of various chemotherapeutics. To the writer's knowledge, there have been no human trials of AA therapy in combination with standard chemotherapy (with the possible exception of the MAC protocols for Multiple Myeloma), but there have been several animal based therapies showing a synergistic or chemosensitizing action. AA has been shown to have potentiating or chemosensitizing effects when used with the following chemotherapeutics in animal models:

- 5FU[9,10,11]
- BCNU[12]
- Bleomycin[13]
- Cisplatin[9, 11,14]
- Cyclophosphamide[15]
- Dacarbazine[16]

Enhancing AA Effect using Alpha Lipoic Acid

In the previously mentioned privately published study by Riordan et al., the researchers explored the possibility of potentiating AA cytotoxic effect using another well known micronutrient, alpha lipoic acid (ALA). In cells, ALA is reduced to dihydrolipoic acid which has been shown to regenerate vitamin C along with other antioxidants.[17,18] The researchers found that by using ALA in a 10:1 mixture with AA, it greatly reduced the dosage required for cytotoxic action.[6] The 40% oral absorption rate of R+ ALA is far greater than racemic ALA preparations.[19] Oral ALA treatments are generally well tolerated at 400-1500 mg in a single oral bolus doses.[20] The half-life of R+ ALA is approximately 0.5 hours, with a peak in serum concentration after 0.5 hours. The half-life of many sustained release R+ ALA (R+ SR - ALA) is between 2-4 hours, with the peak serum concentration occurring at 1.5-2 hours. Therefore, a pretreatment of oral SR-ALA of 400-1500 mg (depending on patient tolerance) one hour before treatment should theoretically enhance the cytotoxic effect of IV AA.

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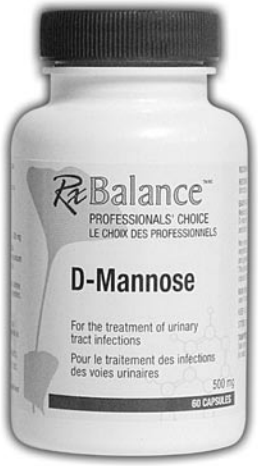

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General Recommendations on High Dose AA Therapy in Practice

Given the ongoing research developments of high dose AA, the use of this therapy as part of naturopathic oncological treatments will only grow. Based on the research, the following therapy suggestions can be made:

1. High doses of AA must be infused over a short period of time to maximize cytotoxic effect. In general 50-100 g should be infused over 2-3 (overall rate 250-500 mg/minute) hours, aiming at serum concentrations greater than 400 mg/dL; however, as each tumor process and individual is different, cytotoxic effects may be achieved at higher or lower doses than the 400 mg/dL level.
2. Since the life of IV AA in the body is roughly 24 hours,[4] maximal effects can be achieved with 3-5 infusions/week. Unfortunately, at a treatment frequency of daily, infusions costs become extraordinarily high.
3. Pretreatment with 400-1500 mg of oral R+ SR-ALA can potentiate the cytotoxic effects.
4. Due to potential hypoglycemic[22,23] /diuretic effects of high dose AA, patients should be well fed, well hydrated and potentially infusions should be run with 5% dextrose (D5W), where appropriate.

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'Metastatic Inefficiency':
A Lever to Hinder the Spread of Cancer

by Dugald Seely ND

Naturopathic doctors are well placed to offer high quality holistic care to cancer patients. There's no question that cancer treatment is a serious process with respect to both therapy and emotional involvement; yet, as clinicians, I believe we can provide some real benefit in this area. Much more clinical research needs to be done; however, there is a growing body of evidence to support the treatments NDs have to offer in cancer care.

Treatments available to NDs in the fight against cancer are vast and this is truly one of our greatest strengths. The ability to put together treatment regimes that are synergistic and intelligently thought out is a luxury that oncologists do not share to anywhere near the same degree. Surgery, chemotherapy, and radiation therapy are important first line therapeutic tools, yet there are more options: ones readily available and at our disposal.

My goal in this article is to briefly elucidate the mechanisms of cancer progression that provide the most vulnerable targets for the kind of therapies we use. The concept that I'd like to put forward is the idea that metastasis is an inherently inefficient process and one that requires a number of different characteristics to be in place for successful metastasis to occur. Some of these characteristics (read barriers) necessary for this process include achieving the total combination of the following abnormal cellular attributes[1, 2]:

1. Resistance to extracellular and intracellular death signals (apoptotic signals)
2. Motility
3. Ability to break down basement membrane and extracellular matrix
4. Ability to intravasate
5. Survivability during open transport in circulation
6. Ability to evade the immune system
7. Ability to extravasate
8. Ability to co-opt local, non-cancerous stromal cells
9. Ability to promote angiogenesis (development of new blood vessels)
10. Ability to be indefinitely self-proliferative

These characteristics are all necessary for a cell or group of cells to acquire in order to allow the metastatic spread of cancer. The clinical significance of this is that without metastasis, cancer would be far less deadly than it is. In fact, 90% of cancer mortality is due to metastasis[3]. What I find fascinating is the fact that cells are being constantly shed by tumours; however very few of them are able to produce a successful micro-metastasis downstream of the primary tumour. Model systems indicate that one million cancer cells per gram of tumour tissue can be seeded into the bloodstream daily[4]. The vast majority of these cells, however, are unable to successfully metastasize. If we are able to augment any of the barriers listed above, and make it harder for metastasis to occur, can we not then further decrease an already low probability of cancer spread? Theoretically, I think the answer is a resounding yes; and while the research base is limited, this is partially backed up by the evidence.

Conventional chemotherapy, while not abandoning older highly cytotoxic drugs, is moving towards the use of newer molecular agents which target cellular mechanisms inherent and ideally specific to cancer cells. Semi-successful examples of these agents include Avastin (bevacizumab) and Herceptin (trastuzumab). Avastin is a VEGF monoclonal antibody that targets the development of angiogenesis thereby depriving cancer tissue of needed nutrients and oxygen as well as reducing the likelihood of spread[5]. Herceptin is also a monoclonal antibody targeted against the HER2 onco-protein overexpressed in 25% of all breast cancers and which is clearly associated with a poor prognosis[6].

The idea behind these newer agents is good and some benefits are being achieved; however, therapy is still limited to the pharmaceutical model which largely employs a mono-therapeutic approach. In addition to a number of other therapies, NDs have access to a wide selection of natural health products (NHPs) that can act on the processes required for metastatic spread from many different angles simultaneously. A small fraction of examples of promising NHPs are provided in the table below that target the cellular mechanisms which ultimately drive cancer and its metastatic spread. Synergy is our ally in this fight. If we can enhance metastatic inefficiency via a 'holistic' cell-based treatment, then we may indeed help thwart cancer progression.

Through the augmentation of barriers to metastasis, I believe an effective anti-cancer management approach is within the ND's grasp via our extensive therapeutic toolkit. Numerous NHPs have demonstrated evidence of being able to act at different levels within the metastatic pathway. Combining NHPs to target these metastatic barriers should theoretically create an anti-metastatic environment within the body without concomitant cytotoxicity.

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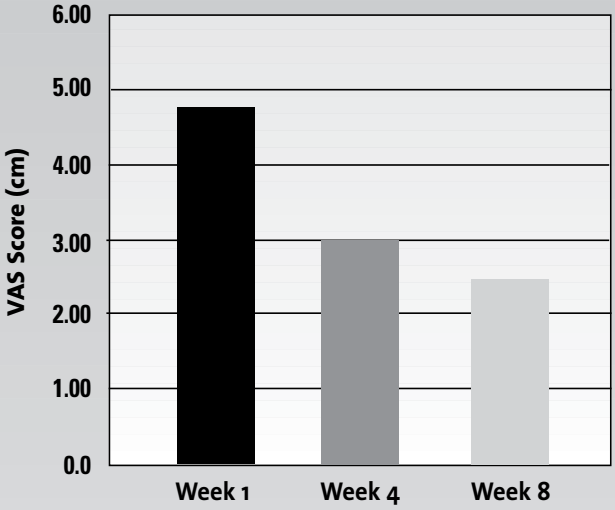

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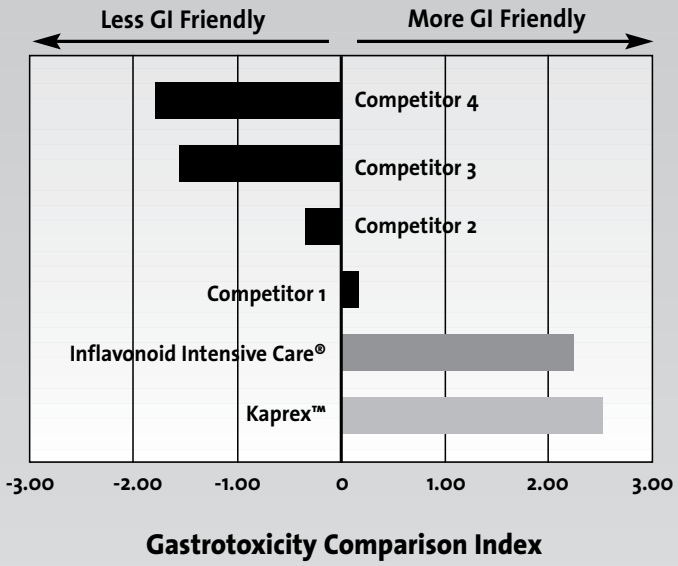

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Natural Health Product	Metastatic Barriers Augmented
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Melatonin[10, 11]	Increased immune surveillance, anti-proliferative, pro-apoptotic
Curcumin [7, 12]	Anti-angiogenic, anti-proliferative, anti-inflammatory
Modified Citrus Pectin[13,14,15]	Reduced survivability in circulation, reduced ability to extravasate
Coriolus versicolor (Turkey Tail)[16, 17]	Increased immune surveillance, pro-apoptotic
Viscum album (Mistletoe)[7, 18, 19]	Increased immune surveillance, anti-angiogenic, pro-apoptotic
Resveratrol[7, 20]	Anti-angiogenic, anti-proliferative, anti-inflammatory, pro-apoptotic

In summary, the use of NHPs can and should be applied with the idea of enhancing the body's own ability to hinder the spread of cancer. The strategic approach to augment our body's own innate defenses against metastasis is fully in line with our philosophy and the Vis Medicatrix Naturae. Other therapeutic options can be considered within this context and can be seen as adding to the body's overall capacity to get rid of cancer on its own terms. Whether it is the use of modified citrus pectin to isolate cancer cells in circulation, thus making them more likely to die in transit; the use of hydrotherapy to increase immune surveillance; or the use of intravenous vitamin C to increase cancer cell apoptosis: the end goal remains the same.

It probably should come as no surprise that new treatments in cancer therapy are working to target aspects of cancer progression that so many of our own treatments already have in spades. The experience being built by clinicians and the evidence on specific natural agents and especially combination of NHPs in cancer research is growing. Real change appears to be occurring as our level of understanding and development of treatment options become more sophisticated in the pursuit of greater control over cancer.

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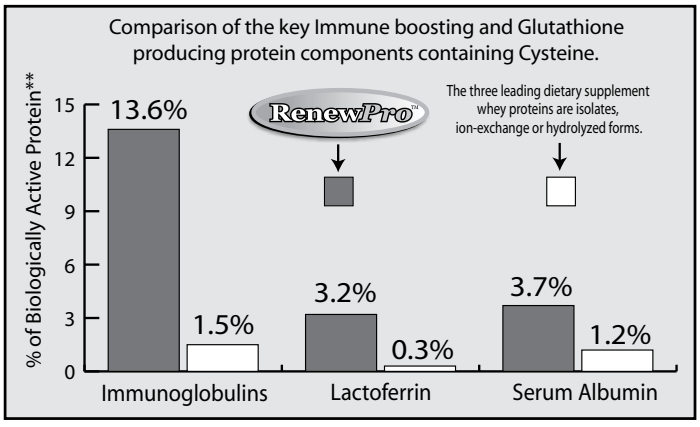

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The OAND is pleased to announce that SOS Emergency Response Technologies is the newest partner in the OAND Member Advantage Program.

SOS, in conjunction with Defibtech LLC is pleased to offer the Defibtech Lifeline™ Automated External Defibrillators (AED) for placement in OAND member clinics, along with comprehensive CPR / AED training at preferred rates to OAND members as part of our Member Advantage Program.

An AED is a device that analyzes the heart rhythm of a person who has suffered a sudden cardiac arrest (SCA).

Anyone can have a SCA and although there are risk factors that increase the chance for individuals having SCA a large percentage of victims are people with no known risk factors.

The AED determines if the heart's rhythm requires defibrillation and, if required, prompts the person using the AED to deliver a shock to restart the heart. AEDs save lives. Defibrillation within 3 minutes of a SCA and the chances of survival are 70%. After 10 minutes, the chances of survival are negligible.

To address the issue of public access to AEDs, last December the Ontario provincial government tabled legislation that would protect people from civil liability when they attempt to save a life using a public automated external defibrillator (AED).

The Defibtech Lifeline™ AED is known for its simplicity, ease-of-use, durability, attractive design and affordability. In conjunction with life-saving CPR / AED training from SOS Emergency Response Technologies Toronto, OAND members who take advantage of this AED program will be pioneers in providing assurance to their staff, patients and the community at large that they are trained and equipped to save lives in the event that a sudden cardiac arrest emergency occurs in a ND clinic.

NDs are strongly encouraged to participate in this program as an increasing number of health care providers are following the government's direction to have AEDs installed in as many public and clinic locations as possible across the province.

The OAND/SOS Program includes comprehensive CPR/ AED training for up to 12 people with each purchase + the insight and oversight of a medical director in the situation where the AED is used. For complete AED Program Details, please refer to the OAND Member Advantage Program web page on the OAND member level.

The Original

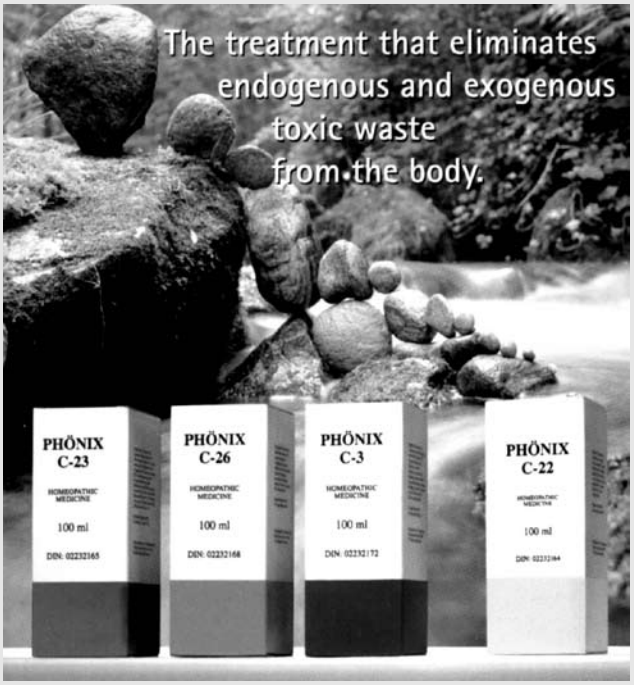
Phönix Detoxification-Program

Detoxification methods have been used to regenerate and strengthen organs and to help all systems to function better. Dysfunctions could be caused by toxic substances which have been consumed with our food, or absorbed from Amalgam fillings, or by being exposed to environmental toxins. Detox methods are used to bind these toxins in our organism and help our body to flush them out. The Phönix Detox-Program is highly recommended for:

Stimulation of Metabolism
Allergies
Skin Disorders
Rheumatism
Immune Weakness
Therapy Resistant Blockages
Mercury Affections
Environmental Toxins
Or For Prevention Once Or Twice Per Year

The "Original" **Phönix Detox-Program** has been successfully used by practitioners since over 15 years. By combining 3 products this concept helps to to regenerate and cleanse the liver **(Phönix C-23)**, to regenerate and cleanse the kidneys **(Phönix C-26)**, and to regenerate and cleanse the body's defense system (lymphatic system) **(Phönix C-3)**. The combination with **Phönix C-22** is always recommended when the body's defense system needs special support.

This Program can be combined with any other treatment or intake of any other supplement. NO side effects are known. General whole body detoxification is recommended at least once or twice per year to eliminate accumilated toxic waste. The **Phönix Detox-Program** is administered over approximately 45 days. This time period can or should be extended for as long as needed, especially when troubled with chronic or severe diseases (e.g. cancer, fybromyalgia, rheumatism, psoriasis, food and environmental allergies).



Ask your Health Care Practitioner about

Phönix - Detoxification Therapy
(for an effective whole body detoxification)

All Phönix Spagyric Homeopathics are manufactured in Germany and of highest possible quality.
All products are exclusively distributed by Bona Dea Ltd.
For information call **1-800-368-8521**, or visit our web site at:
www.bona-dea.com

CLASSIFIED ADS

Carp Ridge Natural Health Clinic near Ottawa seeks recently graduated registered N.D. Must be team oriented, good communicator, competent with physical and emotional therapies. Long term salaried position (negotiable), available January 2008, training provided. Contact CRNHC, 2386 Thomas Dolan Parkway, Carp, ON. Phone (613)839-1198 or visit our website at www.ecowellness.com.

NEW ONLINE CAREER CENTRE

ND CAREER CENTRE

The purpose of the ND Career Centre is to create a virtual job fair for our members. Here you will be able to view current employment opportunities within the profession, as well as consider resumes posted by other NDs looking for employment.

To post either a job ad or your resume, please contact Ronda Parkes, Program Manager, Marketing and Publications via email ronda@oand.org or phone 416-233-3001, ext. 28.

Continuing Education Recordings Available to Order:

- OAND Convention 2006 (previous convention recordings also available)
- Controversies in Breastfeeding with Jack Newman MD
- The S.O.A.P. Format with Fraser Smith ND
- Boundary Issues for Naturopathic Doctors: A Panel Discussion
- CCNM/OAND Primary Care Series

Recording order forms available online at www.oand.org and from the OAND office: 416-233-2001, info@oand.org.

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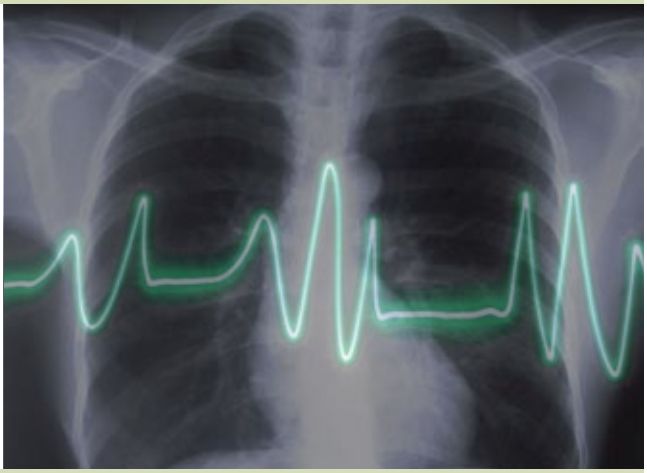
CARDIOLOGY CONFERENCE
Ryerson University
April 19 - 20, 2008



CE credits have been approved.

Saturday, April 19

Aggie Casey MS, RN
A Mind/Body Approach to Stress Management
CE Credits: 1.5 Lifestyle Modification and Counselling

John Millar ND
Cardiology: The Treatment and Management with Classical Homeopathy
CE Credits: 1.5 Homeopathic Medicine

Shelley Burns ND
"And the Beat Goes On"
A Naturopathic Perspective on Cardiac Health
CE Credits: 0.25 Pharmacology; 0.5 Botanical Medicine; 0.25 Nutritional Medicine; and 0.5 Lifestyle Modification and Counselling

Sunday, April 20

Mikhael Adams ND
Using the "Gold" of Glycerine Macerates to Heal the Heart
CE Credits: 1.5 Botanical Medicine

Mary Wu MD (TCM), MSc, Dipl. OM, RAc
Traditional Chinese Medicine for Cardiovascular Diseases
CE Credits: 1.5 Asian Medicine

Quinn Rivet ND
The Relationship between Cardiomyopathy and Primary Renal Failure
CE Credits: 0.5 Homeopathic Medicine, 0.5 Nutritional Medicine, 0.25 Botanical Medicine, and 0.25 Asian Medicine

Laurence Gray ND
Parenteral Therapies for Cardiology
CE Credits: 1.5 Parenteral Therapy OR 0.5 Pharmacology, 0.5 Botanical Medicine, 0.25 Nutritional Medicine and 0.25 Homeopathic Medicine

AGM 2008

Ryerson University
April 19, 9:00 - 11:30

WATCH FOR REGISTRATION BROCHURE IN EARLY 2008

OAND Ontario Association of Naturopathic Doctors

the voice and resource for Naturopathic Doctors

CONFERENCE 2008

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DHA Junior & ProEFA Junior
AUGUST 2007

As a practitioner, we think you would agree the best fish oil is one that patients enjoy taking on a daily basis, and is easily digested and utilized by the body.

Patients of all ages love taking Nordic Naturals fish oils, and independent laboratory tests consistently show why. Nordic Naturals fish oils are exceptionally fresh (as demonstrated by ultra-low peroxidation levels), so they don't taste fishy at all. Plus, our patented manufacturing process gives our products a light, fruity taste that appeals to adults and children alike. That's how Nordic Naturals can promise superior patient compliance—and better results.

- Natural triglyceride form
- Proven efficacy from clinical studies
- No fishy taste or aftertaste
- Exceptional freshness
- Unsurpassed purity

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ProEFA Lq. & CLO capsules
SEPT 2007

Ecotrend is offering a 20% discount on these Nordic Naturals products:

Aug 07 DHA Junior and ProEFA Junior

Sept 07 Pro EFA Liquid and Arctic Cod LIver Oil Capsules

Show Special!

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All Nordic Naturals Products!
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