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## FALL 2007

### WHAT'S HAPPENING

This month we will explore two topics that have been getting a lot of attention in the media recently. John will take a critical look at a new vaccine which prevents genital warts and through this perhaps many cases of cervical cancer. Another item receiving a lot of attention recently is vitamin D. Now a part of the new Canada Food Guide, this vitamin seems to be the most recent 'health craze.' Lindsay will touch on some of the new research and try to determine just how excited we should be.

### CLINIC UPDATES

Beginning December 1, 2007 there will be some price changes to our in-office tests. Please see the last page in this newsletter, an open letter to our patients, for more information on this and a breakdown of the new prices.

As hoped at the time of the last newsletter we have put up a new road sign at the end of our driveway. Before the snow arrives we are planning to have a fence around the parking lot with access to observe the alpacas if desired. Come by and see the new changes...

### HOLIDAY HOURS

The clinic will be closed the following days:  
*Monday December 24* – after 12 pm  
*Tuesday December 25*  
*Wednesday December 26*  
*Tuesday January 1*

### UPCOMING EVENTS

#### Annual Bio-Ag Seminar

This seminar is put on by the agricultural business operating above our clinic. Although the focus is on agricultural issues many of you may find this year's topics of interest.

#### *Bio-Ag Seminar*

*Date:* January 23, 2008 - 9:30 am – 3:00 p.m.

*Keynote Speaker:* **Shiv Chopra, Ph.D.** will be speaking on Safety and Security of Food in Globalized Canada

*Other Speakers:*

- **Murray Bast**, President, Bio-Ag will talk about the link between healthy soils and healthy animals
- **Lindsay Bast, N.D.** will continue Murray's link to include healthy people

*Location:* Perth East Recreation Complex, Milverton Ontario

*Cost:* \$50.00 + GST (includes lunch)

Please register by January 14, 2008 (seating is limited.) Call 1-800-363-5278 to register (pre-payment required)

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## JOHN'S MESSAGE

### A CRITICAL LOOK AT THE NEW HPV VACCINE

One of the most controversial areas of modern medicine is vaccinations. Most recently there has been a lot of talk about a new vaccine program intended to eradicate women's risk of developing cervical cancer. Medical experts are telling us that a sexually transmitted virus called HPV (human papilloma virus) causes some cancers, including cervical cancers. Along with that, a pharmaceutical giant, Merck, has just introduced an HPV vaccine called Gardasil to immunize against some strains of the virus. Is that HPV vaccine actually safe and does it prevent cervical cancers? Among policy-makers, doctors, and cancer researchers the verdict is very mixed, for and against. Despite the disagreement, Canada has given the vaccine the go-ahead for use on elementary school girls.

Among those in favour, Canada's Public Health Agency has endorsed the vaccine as highly effective. News reports have been overwhelmingly enthusiastic, repeating clinical trial data that Gardasil eliminates the risk of the two most common types of the virus believed to cause 70 per cent of all cervical cancers. Twenty-four U.S. states have since pushed for mandatory HPV vaccination, and Virginia has already passed a law requiring vaccination before junior high.

Dr. John Blatherwick, chief medical officer of Vancouver Coastal Health, is so impressed with the scientific data that he'd rather not wait for health policy recommendations from a Health Canada Immunization Committee (due by the end of 2007) and would like to start a mass vaccination program for B.C. girls this September. "We've entered a brave new world in medical science," he says of the

Gardasil vaccine. "The studies have been rigorous and I think it's ready for mass use."

How could a parent not consent to such a life-saving vaccination program? The vaccine seems like the solution all women have been waiting for. But since the vaccine campaign commenced, some new clinical findings and opinions have surfaced. Recently published Gardasil studies and medical journal editorials are finding that the vaccine only reduced the risk of precancerous abnormal cells by 17 per cent. In fact, people who are vaccinated might be at risk of picking up twelve other high-risk strains of HPV not covered by the vaccine. Just as we found with the flu vaccine, the virus strains that are vaccinated against are rarely found to be the virus causing most of the viral outbreaks that ensue after the mass vaccination. Viruses adapt to people's susceptibility; the vaccine approach cannot replace a healthy immune system.

As with other vaccines, people are typically not informed about potential adverse reactions they might experience, and, when experienced, these reactions go largely unreported but are brushed off with, "Well, the vaccine has not been found to cause that type of reaction". It is highly questionable whether girls should receive the vaccine years before they become sexually active, particularly since recent data from the U.S. Center for Disease Control (CDC) has uncovered over 1,600 adverse effects among Gardasil-vaccinated people in the general population, including 371 serious reactions.

A recent New England Journal of Medicine paper co-authored by Dr. Karen McCune, a professor of obstetrics at the University of California San Francisco, has questioned the effectiveness of the vaccine. She clarifies that Merck's three-year clinical trial tracked not only cancer cell development but also the development of lesions that were both

typically benign and disappear without treatment. Her paper concludes that the vaccine has not been shown effective in curbing these types of cancers. Approximately 80 per cent of the population will contract one of over 100 strains of HPV without even knowing it, and the virus will typically disappear within one to three years. In comparison, the cervical cancer mortality rate is approximately two women per 100,000. The paper finds that the vaccine's "potential risks outweigh the potential benefits," Risks are that Gardasil could make women more vulnerable to the HPV strains not covered by the vaccine. She counters a recent Oprah Winfrey show in which a doctor claimed Gardasil protects against 99 per cent of cervical cancers. "That's just wrong and there are too many unanswered questions here", says McCune.

Her paper also found that the vaccine reduced cervical lesions by only 20%, with the reduction being only among lesions caused by the 4 viral strains the vaccine is specific for. More disturbing, the study found that those who were vaccinated developed more cervical lesions caused by other HPV strains. The FDA also questioned Gardasil's efficacy last May before approving the vaccine, acknowledging that in some patients with other strains of HPV, Gardasil potentially enhanced disease among those with persistent HPV infections and caused higher grade lesions that "might offset the overall clinical effectiveness of the vaccine."

But there are further questions about the link between HPV and cervical cancers. A 2003 paper by the National Cancer Institute (NCI) acknowledged even if someone has HPV they might not develop cervical cancer. And even if someone has cervical cancer, they might not have HPV. They said researchers should also investigate other cancer-causing risk factors like smoking, poor nutrition, birth control pills and socio-economic factors such as poverty. The American Cancer Society says

that only "a very small number" of persistent HPV infections are linked to cervical cancers, and warns that women under 30 shouldn't even get HPV tests since "too many" are HPV-positive. The Canadian Cancer Institute ranks the probability of death from cervical cancer at 0.2 per cent, making it the second lowest ranking cancer threat in Canada. It begs the question, "What is driving this vaccination campaign so eagerly?"

The Canadian Cancer Society thinks the HPV vaccine, which costs \$404 for the three required shots, should be available and affordable. Health Canada has already set aside \$300 million for mass-HPV vaccination and set up a committee to look at feasibility since research has determined that it would cost \$2 billion to inoculate 5 million girls aged nine to 13. They should have recommendations by the end of the year, but according to Alain Desroches of Health Canada, PEI has already decided to start a vaccination program.

Merck chose to gear down its aggressive "One Less" Gardasil promotional campaign after state politicians began calling for mandatory vaccination programs. Around that time it was reported that the governor of Texas (the first state to push for mandatory school-based programs for grade six girls) was connected to Merck-affiliated lobbyists and had received campaign funding from that company.

Merck has sold over 4 million doses of Gardasil in the U.S. and as a "blockbuster" drug it's expected to net over \$1 billion in sales globally. In 2006 it was the third biggest selling "new molecular entity" in Canada netting \$1.9 million.

As Dr. Nancy McCune stated, "Too often, marketing trumps science." Seeing a different perspective on the HPV vaccine issue will hopefully give parents, as well as other women targeted a better basis on which to make a sound decision.

## LINDSAY'S MESSAGE LINDSAY BAST, B.Sc., N.D.

### VITAMIN D

In the past several months many newspaper articles as well as television news reports have focused on new vitamin D research. Searching the PubMed database which catalogues most scientific journals we can see an increase of 13% in the number of articles related to vitamin D in the past year. This recent attention raises several questions but also reminds us that at times we must be cautious about what we hear in the media. Although often unintentional, overstating the benefits or drawbacks of any issue is a good way to generate interest in a news story. The rest of this article will examine the role of vitamin D in our body, look at some of the new research and explore what pieces of the puzzle may be missing.

#### ***Quick Facts on Vitamin D***

Although new uses and clinical applications of vitamin D are constantly being discovered, vitamin D has been a known essential nutrient for over 80 years. The deficiency syndrome known as rickets has been described clinically for centuries, however vitamin D had not been isolated until the 1920s. It was originally classified as a fat-soluble vitamin (however its function in the body lead some to think it should be classified as a hormone), which means that it requires fat intake in order to be absorbed into the body. The most significant source of vitamin D for most people is fortified milk. Other fortified food sources include some margarines and soy/rice beverages. There are actually few natural food sources of vitamin D. Animal sources such as fish (particularly fatty fish such as salmon, sardines and herring), liver and egg yolk are among the only ones. The body actually synthesizes the majority of its vitamin D from a precursor in the skin and the help of sunlight. However, the further north in latitude we live, the less sufficient exposure

we receive and the more dietary intake of vitamin D is required. Another interesting fact is that sunscreen of SPF 8 rating or higher applied according to manufacturers instructions will decrease the body's synthesis of Vitamin D by 80-95%. This does not mean one should go without sunscreen, as damaging ultraviolet rays are associated with skin cancer. However some prudent sun exposure goes a long way to maintaining proper vitamin D levels. In fact, given enough time in the sun people need no vitamin D from foods. Adequate vitamin D from the sun depends on skin type. As a general rule the faster a person burns the faster they produce vitamin D. For most people, a few minutes in the sun every day before putting on sunscreen may be a good idea. Pay attention to daily UV forecasts and aim to get 5-10 minutes in the sun without sunscreen before UV rays reach their most intense.

Vitamin D obtained from food or the sun both require metabolism by the liver and the kidney, so impaired function of either of these organs can also lead to vitamin D deficiency. For many years the main role of vitamin D was in bone growth. Vitamin D raises the blood levels of calcium and phosphorus which are incorporated into the bones. The most common symptoms of vitamin D deficiency are the same as those of calcium deficiency and in children this results in a disease called rickets, or faulty calcification of the bones. Additionally the symptoms of vitamin D toxicity mimic those of calcium toxicity. Ultimately calcification of soft tissues (such as blood vessels) may result however more vague symptoms such as headache, muscle weakness and joint pain may also be present early on.

Although many vitamin D requirements are currently being revised, the 'allowable intake' adopted

by Health Canada in 1997 was set at 200 IU for adults aged 19-50 years and the tolerable upper limit (safe amount before toxicity concerns) at 2000 IU. With the recent release of a new Canada Food Guide there was a recommendation for adults over 50 to supplement with 400 IU of vitamin D/day to make up for a deficiency in the dietary recommendations. The Canadian Cancer Society has also recently suggested that adults supplement with 1000 IU vitamin D during the fall and winter months or year round if their sun exposure is limited. They are still cautious about recommending too much sun due to the risk of skin cancer.

### ***New Findings***

Many recent research papers have revealed a potent 'anti-cancer' effect of vitamin D. For some time epidemiological studies have indicated a decreased incidence of breast, colon and prostate cancer with increasing vitamin D levels. More recent research involving over 1000 women demonstrated a nearly 60% risk reduction in all forms of cancer with 1100 IU vitamin D and 1400-1500 mg calcium supplementation over 4 years. There is also clear and recently validated evidence for the beneficial effects of vitamin D and calcium in bone density and fracture risk.

Further benefits are being revealed for several aspects of immunity including autoimmune diseases (particularly multiple sclerosis) and skin diseases such as psoriasis.

### ***Discussion***

It has been clear for some time that vitamin D is critical for musculoskeletal health. It appears as though the recent excitement around vitamin D and cancer is not just a media construct but that some good scientific evidence backs it up. However some pieces to the puzzle may be missing. Why have these breakthroughs in vitamin D just occurred now? Many studies have shown genetic defects in production of a vitamin D receptor. This would mean that amounts of vitamin D sufficient in most people would not

be effective in these people. Supplementation would certainly be required in this population. The massive increase in sunscreen use may also explain why vitamin D has become such a critical nutrient. With so few food sources, production from sun exposure is critical for maintaining adequate levels. Fear of sun exposure, less outdoor activities due to sedentary jobs and leisure activities, and smog all reduce our production of vitamin D through the sun.

Although general supplementation is likely to have few adverse effects, we should also remember that isolated nutrient intake is only part of the complete picture. First, part of the reason for sun being more damaging to our skin is the breakdown of our ozone layer. We cannot discount the negative impact our society has had on the environment and the consequent decrease in our health. Additionally, smog is another factor that will inhibit vitamin D production in the skin, another human made problem. It has been found that antioxidant polyphenols in green tea can help prevent sun damage from UV rays. As most people are consuming too few fruits and vegetables we lack natural sources of these polyphenols. Liver and kidney function must be considered in determining vitamin D status and to complete the picture we must also consider that some medications deplete vitamin D in the body. Among these are corticosteroids, which are increasingly prescribed.

So, yes, vitamin D is an essential nutrient and supplementation may offer significant benefit for the population as a whole. It may be prudent to measure blood levels of vitamin D prior to initiating treatment to determine if a deficiency exists and again several months after supplementation. Your medical or naturopathic doctor can do this testing. Using this information, you and your doctor can determine the best ways for you to optimize your vitamin D status.

## NOTICE OF PRICE CHANGES – TO TAKE EFFECT DECEMBER 1, 2007

To Our Loyal Patients,

At Greenwood Wellness Clinic we strive to provide several advanced, in-office testing options to best serve you, our patients. To date these tests have been included in consultation fees. Unfortunately, due to continued update and maintenance costs we will be forced to charge for our in-office tests. Our consultation rates will remain the same.

**Initial visit** consultation fee, \$125 plus applicable testing

Follow up visits **dependent on length of visit based on an hourly rate of \$100/hour**

<u>Test</u>	<u>Charge</u>
<i>In office cholesterol</i>	<i>\$5.00</i>
<i>In office glucose</i>	<i>\$3.00</i>
<i>Live blood analysis</i>	<i>\$7.00</i>
<i>Biological terrain assessment</i>	<i>\$18.00</i>
<i>Bio-impedance (body composition) assessment</i>	<i>\$3.00</i>
<i>Additional blood, urine, hair analysis (specific prices based on independent lab rates *please note: a \$5 fee will be added to each series of lab tests in order to cover administrative costs)</i>	

Thank you for your understanding in this matter as we strive to support you on your journey to wellness.

If you have any questions, please feel free to discuss it with any of our staff.

Sincerely,

Greenwood Wellness Clinic Staff

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**Note:** The information provided in this newsletter is not intended to treat or diagnose any condition. Please see your health care provider before beginning any new treatment.