

Diabetes Care in Nova Scotia

a newsletter of the Diabetes Care Program of Nova Scotia

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State of the Art

Transforming the Trans

Trans unsaturated fatty acids (trans fats) in foods and their impact on health have been a major focus in recent media releases and the health literature. Although the potential adverse effects of trans fats on cardiovascular health were recognized three decades ago, it was not until recently (the past 10 years) that reliable scientific evidence revealed that consumption of trans fats can increase the risk of developing heart disease. This article reviews the relationship between trans fat intake and coronary heart disease (CHD) and diabetes. It also provides some added insight into the modifications that have already taken place in the trans fat content of the Canadian food supply.

Trans fats are both naturally occurring (found in certain foods) and industrially produced. Naturally occurring trans fats are found in small amounts in dairy foods and beef (2-6% of total fat) as well as lamb (up to 8% of total fat). These naturally occurring trans fats are produced by the action of bacteria in the ruminant's stomach and appear to carry less risk for CHD than industrially produced trans fat. This may be due to a lower level of intake (typically less than 0.5% of total energy intake) and/or the presence of other factors in these specific food products that balance any adverse effects.¹

Industrially produced trans fats are produced in small amounts (0.5-2.0% of total fat) during a chemical refining of liquid oils such as canola and soybean oils. Trans fats are also formed when food manufacturers use a process called partial hydrogenation, which combines liquid oils (usually canola or soybean) with hydrogen to harden the oil into margarine or shortening. Foods made with a high concentration of trans fats have a long shelf life, crispy texture (many snack foods and commercial fried foods), or a "melt in your mouth" sensation (bakery products, confections, and frozen desserts). The trans fat content of these foods can be as high as 45% of total fat content!

The majority of trans fat in the diet comes from industrially produced trans fats found in margarines (especially hard margarine), commercially fried foods, and bakery products that are made with shortening, margarine, or oils containing partially hydrogenated fat. It is estimated that Canadians have one of the highest intake of industrially produced trans fats in the world.¹

Trans fats and saturated fats (found in animal fats and dairy foods, as well as coconut, palm, and palm kernel oils) raise the risk of developing CHD. Saturated fats raise the blood levels of LDL-cholesterol and HDL-cholesterol. Trans fats have been shown to raise the level of LDL-cholesterol, reduce the particle size of LDL-cholesterol, and lower the level of HDL-cholesterol.² These results are evident even when the intake of trans fats is low, about 2-7 g for a person consuming 2000 kcal a day, thus demonstrating that trans fats do even more harm than saturated fats.²

The Nurses' Health Study also demonstrated a greater reduced risk of CHD when even small amounts of energy (2%) from trans fats were replaced with energy from unhydrogenated, unsaturated fats. This replacement reduced the risk of CHD by 53%. When the energy (5%)

CONTENTS

State of the Art	
Transforming the Trans	1
News From the Care Program	3
New Resources	5
Pediatric Focus	
In Our Schools... ..	6
Practice Points	7
Research to Practice	
Developing a Healthy Living Program for Seniors: Part 2	7
DCPNS Summer 2006 Phone Survey Results	8
Educator Sharing	
Health Literacy Intersectoral Action Strategy Planning Workshop	10
Healthy Eating Nova Scotia	11
Nova Scotia Diabetes Assistance Program Update	12
News From Around the Province	13
News From Industry	14

Newsletter Publication Dates:

The first week of January, April, July, and October. Questions or contributions should be submitted at least 3 to 4 weeks prior to the publication date.

from saturated fats was replaced with unhydrogenated, unsaturated fats, this reduced the risk by only 42%.³ This suggests that replacing harmful fats with more suitable fats may be more effective than reducing overall fat intake.

That being said, the incidence of CHD in the population has been greater than that predicted by consumption of trans fats and changes in serum lipid levels alone. This suggests that trans fats also may influence other risk factors for CHD through non-lipid pathways such as systemic inflammation and impaired endothelial function. On a per calorie basis, trans fats appear to increase the risk of CHD more than any other macronutrient such that a 2% increase in energy intake from trans fats is associated with a 23% increase in the incidence of CHD.² Trans fats may also influence the risk of developing type 2 diabetes, although more research is needed to investigate possible mechanisms involved including decreased insulin sensitivity and activation of systemic inflammation.²

During the past 10 years, there has been not only increased scientific evidence but also increased awareness among Canadians of the dangers of trans fats consumption. Consumer research showed that the proportion of Canadians reporting awareness of trans fats increased from 45% in 1998 to 79% in 2005.¹

So, How Much is Too Much?

In 2002, the Dietary Reference Intakes (U.S. Institute of Medicine) for trans fats states that trans fats consumption be as low as possible while ensuring a nutritionally adequate diet. Upper limits of intake were not set because the evidence suggested that any rise in trans fat intake increases the risk of CHD. This along with the fact that trans fats are unavoidable in ordinary diets made setting limits impractical.⁴ In 2003, the World Health Organization recommended that total trans fats intake be limited to <1% of total fat intake.⁵ In early 2005, Canada responded with the formation of a multi-stakeholder Trans Fat Task Force. By December 2005, Canada was the first country to regulate mandatory labeling of trans fats on prepackaged foods.¹

The Task Force was charged with developing recommendations and strategies to effectively eliminate or reduce trans fats in Canadian foods to the lowest level possible. The Task Force recognized that it was important to regulate not only the trans fat content of prepackaged foods but to target the full range of food products. The regulatory approach taken by the Task Force targeted the trans fats content of foods purchased

by retailers or food service establishments for direct sale to consumers as well as foods prepared on site by restaurants and other food service establishments. This approach allows the health benefits to accrue even to people who do not read nutrition labels, including vulnerable groups with lower incomes and/or lower literacy skills that have a higher risk of CVD.¹

In June 2006, the Task Force released its report, *TRANSforming the Food Supply*. The Task Force recommended that for all vegetable oils and soft margarines sold to consumers or for use as an ingredient in preparation of foods, the total trans fat content be limited to 2% of total fat content. For all other foods sold to consumers or used as an ingredient in preparation of foods, the total trans fat content be limited to 5% of total fat content. These limits would reduce most of the industrially produced trans fats in foods and half of the remaining trans fat intake would be of naturally occurring trans fat. It is estimated that these limits would decrease the average daily trans fat intake to <1% of total energy intake, which is consistent with current dietary recommendations for trans fats.¹ The regulations are to be finalized by June 2008. A phase-in period has been set for one year (2009) from the date of entry to enforce of the final regulations. An extended phase-in period to within two years (2010) from the date of entry of the final regulations was recommended, recognizing that small and medium-sized companies and specific-applications, such as bakery products, require more time and development to make the transition.¹ In some very special cases, the phase-in period may exceed two years.¹

What is the Current Status of Trans Fats?

Much improvement in the trans fat content of the Canadian food supply has already occurred. Food companies are being urged to develop trans fat alternatives using oils high in monounsaturated fatty acids for frying and heating to high temperatures. These oils have a moderate to high oxidative stability and contribute to lower CHD risk. However, for harder fats such as margarine and shortening, a combination of highly saturated oils or fully hydrogenated oils and different proportions of non-hydrogenated liquid vegetable oils may be used for baking and food processing purposes. It is believed that the use of saturated fats in baked goods should not result in an overall increase in saturated fat intake because the use of saturated and trans fats in other foods has been decreasing.

Many large food companies have already replaced partially hydrogenated oils in many, but not all, of their

food products. Almost all bread products and salad dressings are free of trans fats and significant progress has been made with margarines and french fries. However, making a shift to healthier types of fats used in commercial deep-fried foods and many baked products creates great challenges for the food industry. More research and development is required to produce healthy trans fats alternatives. It is important that the new trans fats alternatives maintain stability for reuse of the oils at high temperatures; maintain the pleasing characteristics of taste, texture, and appearance of the original fat; and maintain consumer acceptability. These changes will require modifications in processing and packaging and may require the purchase of new equipment. This will result in significant increase in cost, at least during the transition period.¹


It could take another four years for food companies to comply with the new regulations. In the meantime, these new regulations present great challenges for consumers in grocery stores, restaurants, and other food service operations. These regulations also present great opportunities for health professionals to identify ways to help shift consumer eating patterns toward healthier alternatives such as fruits and vegetables, grains, and healthier fats. As health care professionals, we have opportunities to investigate ways to enhance public understanding of the new food labels, the health effects of the various types of fat, and the variations in commercial cooking methods in bakeries, restaurants, and food service operations. Enhanced consumer education will enable consumers to ask questions and make more appropriate decisions about their fat consumption in the context of a more healthy diet.*

Brenda Cook, MAdEd PDt CDE
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References:


1. TRANSforming the Food Supply (www.hc-sc.gov.ca). Accessed September 19, 2006.
2. Mozaffarian D, Ascherio A, Willett WC. Trans fatty acids and cardiovascular disease. *N Eng J Med*. 2006;354(April 13):1601-1613.
3. Frank B, Hu MD, Meir J, et al. Dietary fat intake and the risk of coronary heart disease in women. *N Eng J Med*. 1997;337(November 20):1491-1499.
4. Institute of Medicine. *Dietary reference intakes for energy, carbohydrate, fiber, fat, fatty acids, cholesterol, protein, and amino acids*. Washington, DC: National Academies Press; 2002.
5. World Health Organization (www.who.int/en). Accessed October 3, 2006.

News from the Care Program

What a fantastic Thanksgiving weekend! For a number of us, Thanksgiving brings an official close to the summer through a celebration with close family and friends— a time for us to share stories, eat great food, and plan for the next family gathering. I know that I experienced a weekend like no other. The weather was unbelievable—we biked, and then we biked some more, we watched the full moon rise over the bay, and then we watched the sun rise through the mist in a perfect clear blue sky. I know a number of you had similar experiences that remind us of exactly how thankful we are at times like this.

You might wonder the relevance of that earlier piece in this brief editorial. There is none, except to say we have much to enjoy, much to experience, and much to share with others. This newsletter is but one way of sharing experiences and one that we would like our readers to think about as they read this issue. Our summer student has taught us much. Through her eyes, all is new, all has relevance, and all can be applied in the context of the work we do. Working with seniors presented a phenomenal opportunity to experience first hand how to meet the needs of the adult learner. We encourage you to share articles and/or ideas through the DCPNS newsletter. When it comes from your own experiences, it is never old news!

DCPNS Staff

A special thanks to Fran Martin for all her hard work with us this summer. Fran completed her community nutrition internship placement with us while at the same time carrying out a number of DCPNS activities—preparation of the Diabetes Centre (DC) statistical packages for 2005/06, completion of an orientation manual for DC staff, compilation of workshop evaluations, writing articles for the DCPNS newsletter, etc. In this issue of the newsletter (pages 7 & 8), you will find Part 2 of her internship project article as well as comments/reflection on a health literacy workshop (pages 10 & 11) that she attended earlier this spring.  Fran has made significant contributions to our program in the time she has spent with us, and we wanted to thank her publicly.



Jennifer Payne, DCPNS Epidemiologist, completed her 6-month contract with us September 15, 2006; and on October 4, 2006, she gave birth to her third son.

Congratulations to Jennifer and her family on their newest addition. Jennifer plans to return to work with the DCPNS late spring 2007.

We were sorry to see Christine Borgel, Administrative Assistant for Nova Scotia Diabetes Assistance Program, leave the Program at the end of September. Christine is pursuing work in her area of interest and her first love - child-care. We are pleased to introduce and welcome Pamela Gray to this position, effective October 2, 2006. Pamela brings a rich background of experience to this position.

Subcommittees

Best Practice Committee

This committee meets on a quarterly basis and is currently wrapping up final changes to the Dyslipidemia Guidelines and its related patient education module. These guidelines will incorporate the CDA new Clinical Practice Guidelines as released on September 18, 2006. Two external reviewers have reviewed the module, and final changes are now being incorporated. Look for the final product later this fall.

The committee continues its work on exercise and diabetes and will be working toward the development of useful tools for DC staff in the areas of exercise/activity assessment and getting started on an exercise/activity plan/routine.

Preliminary work has also begun on prediabetes. The committee has identified this as an area of interest. With the phone survey that was conducted this summer, we gathered information on approaches/practices in Nova Scotia DCs (*see pages 8 & 9 for an overview of the survey findings*). This information will help guide committee work on what should be our prediabetes approach for Nova Scotia.

Pregnancy and Diabetes Subcommittee

This committee will be working on two key areas in the coming months. The first will be to write a brief chapter for the CDA in their consumer resource "Beyond the Basics." This chapter will focus on pregnancy and diabetes (primarily preexisting diabetes). Secondly, the committee will be developing a strategy to once again draw attention to the need for preconception care and counselling in women with preexisting diabetes. This need is supported by

recently published data from Nova Scotia that shows "...little change in adverse outcomes in infants of diabetic mothers compared with those of nondiabetic mothers despite improvements in the organization of management of diabetic pregnancy care in Nova Scotia" (Yang J, Cummings EA, O'Connell C, Janguard K. Fetal and neonatal outcomes of diabetic pregnancies. *Obstetrics & Gynecology*. 2006;108(3):644-650).

Children and Adolescents with Diabetes Subcommittee

A needs assessment will be conducted later this fall to determine future areas of work for this subcommittee.

Annual Report and Diabetes Centre Statistics

The DCPNS 2005/06 Annual Report has been approved by the DCPNS Board of Directors and should be released by the end of October 2006. Copies will be mailed to DCs, DC Medical Advisors and Managers, District CEOs, and others with a direct interest in diabetes care. A copy will be placed on the website for easy access.

The DC 2005/06 statistical packages had been delayed. However, these are now in the mail (October 12, 2006). The DCPNS would welcome the opportunity to meet with individual DC staff or during scheduled Diabetes Educator Section Chapter meetings to review relevant data. Just pick up the phone, and give us a call to set a time that would be best for your group.

Partnership with CNIB

CNIB will be hosting a public information session in Halifax on the evening of November 21, 2006 (6:00 to 9:30 PM, at the CNIB building, Almon Street). The topic will be *Diabetes and Vision Loss—Options and Opportunities*. Guest speakers include an ophthalmologist, a psychologist, a CNIB consumer with diabetes and vision loss, and resource and services representatives from the CNIB. The DCPNS has been involved in the planning and, along with CDA, will be recognized as a supporting partner. Notices will be mailed to DCs (those in fairly close proximity to Halifax), pharmacists, optometrists, etc. This should be a great evening—we encourage DC staff to promote this program to DC attendees.

Transition Working Group

The DCPNS has formed a Transition Working Group to tackle movement from pediatric to adult diabetes care. On October 13, this



group met for the first time to develop a strategy on how to best address this issue for Nova Scotia. We hope to standardize the approach across Nova Scotia, building on the work started at the DCPNS Spring 2006 workshop and recognizing successes in other provinces. This is an exciting project that we feel will enhance the quality of life for adolescents and young adults living with diabetes. It will also provide an opportunity for educators in the various settings to work toward a common goal. If you are interested in contributing to the work of this committee either directly or as a reviewer of materials, please contact Bev Harpell @ 473-3208.

Diabetes Foot Care Round Table



The next-to-final draft of this document has been completed and is being reviewed by a few select reviewers to ensure all previous comments/

considerations have been incorporated. The report will be disseminated to Board members before being broadly circulated. This document is intended to lead to a number of specific action items that the DCPNS can help to facilitate. Look for a number of focused activities in the months to come.

Using and Displaying Diabetes Data in a Meaningful Way

Jennifer Payne has been working closely with the DCPNS to further enhance the diabetes data being released from the Program. This has primarily focused on the National Diabetes Surveillance System (NDSS) report that will now become a statistical supplement to the DCPNS annual report. This supplement will include information from other diabetes data sources including the DCPNS Registry. Over time, we will incorporate DCPNS Registry data focused on utilization of DC services as well as applicable indicator data (BP values, etc.). The report will be structured in the future to include a "Special Features" section where we can highlight specific work being done with special populations or issues such as children and adolescents, pregnancy and diabetes, prediabetes, etc.

We are aiming for a release date later this fall for this next statistical report. This should correspond with the DoH Business Planning cycle for 2007/08.

Nova Scotia

Diabetes Assistance Program (DAP) Update

Please see the update by Lisa Tay, Project Manager, on pages 12 & 13.

Diabetes Centre Grants

Most of the eight grants that were funded for 2006/07 will be winding up by the end of the calendar year. The DCPNS will circulate the call for letters of intent for projects in 2007/08 by mid-November 2006. The letters of intent will be required by January 12, 2007.

Orientation Manual for Diabetes Centres

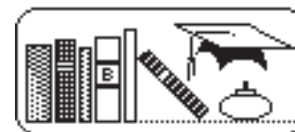
With the assistance of Fran Martin, DCPNS Summer Student/Intern, we have devised an orientation manual for DC staff. This manual provides information on DCPNS services and resources (guideline documents, library services, annotated articles, statistics keeping, etc.). This manual will be made available to all DCs for use by new staff and as a reference piece for existing staff.

DCPNS Complications Prevention-Focused Resources

The DCPNS consumer resources aimed at addressing complications prevention (eyes and feet, heart, and kidney) are being revised and will be reprinted in the coming weeks. We hope to have these available by November for the many programs that use them in abundance during this time.*

Peggy Dunbar, MEd PDt CDE
Coordinator, DCPNS

New Resources



These resources are available from the DCPNS for loan across Nova Scotia. Please call (902) 473-3219 for borrowing information.

BOOKS

- **101 Tips for Behavior Change in Diabetes Education** (2002).
- **Building Connections: A Resource for Young Adults with Type 1 Diabetes** (2004).
- **Clinical Care of the Diabetic Foot** (2005).
- **Reproductive Health Awareness for Teenage Women with Diabetes** (2003).*

Pediatric Focus

IN OUR SCHOOLS.....

This year, I am encouraged by what is happening in our schools. The Food and Nutrition Policy for Nova Scotia Public Schools and the "Everyone Jump...Kids Changing Diabetes" Program are educating children on healthy eating and physical activity to build a foundation for long-term health. It couldn't come at a better time! Statistics tell a sad story of rising rates of prediabetes and type 2 diabetes mellitus (T2DM) in children. In Canada, the number of children diagnosed with T2DM has jumped *15-fold* since 1990 due to obesity, poor nutrition, and lack of exercise.¹ In Nova Scotia, T2DM now accounts for 16 – 18% of newly diagnosed cases in those less than 19 years of age.²

Recently I attended the Nova Scotia kick-off for "Everyone Jump...Kids Changing Diabetes" Program. This school-based program is designed to teach kids how physical activity and healthy eating can help prevent T2DM. It is a little different from other programs in that it engages kids through activities like singing and dancing. There are three components to the program:

- A fun, interactive concert.
- A curriculum-based learning guide for grades 4 to 6.
- An education challenge, including a written paragraph, song lyric, or poster. Winning students of this challenge will receive an individual prize and an educational grant for their school.

"Everyone Jump...Kids Changing Diabetes" is being launched in 100 schools across 4 provinces (Nova Scotia, Newfoundland and Labrador, Ontario, and Alberta). Ten Nova Scotia schools engaged in the program during the week of October 2 to 6, 2006. The educational component of the program was developed by OPHEA (Ontario Physical and Health Education Association) and is sponsored by Novo Nordisk Canada Inc. Having seen the program with my own eyes, I wish all schools in Nova Scotia, or in Canada for that matter, could experience this program. For more information on the program, including future tours, go to: <http://www.ophea.net/Ophea/Ophea.net/Everyone-Jump-Concert-Tour-2006.cfm>.

Chances are you have also heard about the Food and Nutrition Policy for Nova Scotia Public Schools. This policy outlines standards for food and beverages

that can be served in schools. Also, it promotes nutrition education, community partnerships, and a supportive environment for healthy food choices. The objective is to make "the healthy food choice be the easy choice" at school. The policy is made up of 12 directives and 5 guidelines and can be viewed in detail at http://www.ednet.ns.ca/healthy_eating/

The policy indicates foods with minimum, moderate, and maximum nutritional value. This is intended to guide schools in selecting healthy foods and beverages. Policy highlights include:

- **Effective January 2007:**
 - No doughnuts, chocolate bars, chips and ice cream treats.
 - No deep fat frying.
 - Only 100% juice, water, and milk (or nutritional milk alternative) will be sold.
- **Effective September 2007:**
 - School fundraising must involve non-food items or food items from the "maximum and moderate nutrition" lists.
- **Effective June 2008:**
 - No donairs, hot dogs, pepperoni pizza, or other "minimum nutrition" foods and beverages will be sold.

By June 2009, schools will fully implement the 12 policy directives. The guidelines and directives that I am most excited about include:

- Portion sizes. Schools will serve portion sizes reflective of *Canada's Food Guide to Healthy Eating*. No super sizing! For example, 250 ml of pure unsweetened juice (2 vegetable and fruit servings) is recommended instead of 500 ml container (4 vegetable and fruit servings).
- Time to Eat. It is recommended students have 20 minutes to eat lunch. Time to stand in line, travel to lunch areas or prepare foods should not be included in this 20 minutes.
- Pricing. Food and beverages should be sold primarily for providing optimal nutrition, not revenue generation.

This year, more than ever before, kids can practice what they learn in the classroom now that the school is providing more healthy, affordable food and beverage choices.*

Paula Canning, PDt CDE
IWK Health Centre Children and
Adolescents with Diabetes Program

References:

1. Statistics Canada – Ca No. 82-620-MWE: 2004 Canadian Community Health Survey.
2. Diabetes Care Program of Nova Scotia (2004). *NS Incident Cases of Diabetes Mellitus (Types 1 & 2)*. Accessed at www.diabetescareprogram.ns.ca/new/news10.asp.

Practice Points

1. *What diagnosis date should I use for people who convert from prediabetes (IFG, IGT, or IFG & IGT) to type 2 diabetes?*

This is a very important question to ensure that the DCPNS Registry retains accurate data. The date of diagnosis for type 2 diabetes should be directly related to the date of the blood test results that confirmed this diagnosis. *For example, although followed in your DC during 2004 as a person with prediabetes, Mr. Smith is referred again in 2006 with a confirmed diagnosis of type 2 diabetes. In 2006, Mr. Smith should be considered newly diagnosed with type 2 diabetes and a new diagnosis date must be applied.* Remember, for those of you using the on-site Registry, when the type of diabetes changes, the Registry will automatically prompt for a new date of diagnosis.

This correct date of diagnosis will be invaluable as we look for trends in the length of time to conversion for people with the various categories of prediabetes.

2. *I understand that we should be promoting flax seed as a good source of Omega-3 fatty acids. Is this correct and what does the evidence say?*

Not entirely, and this is what we know. The omega-3 fatty acids of particular interest in cardiovascular disease are EPA and DHA and they are found in cold water fatty fish (salmon, mackerel, sardines, and trout). Another type of omega-3 fatty acid, alpha-linolenic acid (ALA), can be metabolized to produce EPA and DHA, but this conversion is modest (10-15%). ALA is found in plant sources such as flax, soybean, and canola oils.

Research studies investigating the cardioprotective effect of omega-3 fatty acids have used primarily fatty fish and fish oil supplements. "The evidence for ALA is sparse and inconclusive" according to

the ADA Nutrition Recommendations and Interventions for Diabetes 2006.¹ Therefore, the recommendation of two or more servings of fatty fish per week (excluding commercially fried fish) is preferred.

Reference:

1. American Diabetes Association. Nutrition recommendations and interventions for diabetes-2006. A position statement of the American Diabetes Association. *Diabetes Care*. 2006;29(9):2140-2157.*

Research to Practice

DEVELOPING A HEALTHY LIVING PROGRAM FOR SENIORS: PART 2.

As a component of my community-focused dietetic internship with the DCPNS this past summer, I developed and facilitated a healthy living program for seniors. In the last issue of *Diabetes Care in Nova Scotia* I described the needs assessment portion of this project. This article will focus on the program development, implementation, and evaluation processes, and will also highlight my key learning experiences.



Program Overview

The program that emerged from the needs assessment was entitled "In-the-Know About Nutrition." This program was designed to help seniors better understand the nutrients that are listed on Nutrition Facts tables. This was achieved by discussing the roles and functions of those nutrients in relation to seniors' health issues and by reviewing with participants their approximate daily nutrient requirements. This information would help prepare participants for a formal label-reading class, such as is offered through local grocery stores, and/or enable them to make better use of the information on food labels.

Program Development and Implementation

It was my goal to incorporate principles of Adult Learning Theory into the development and implementation phases of this program. First and foremost, I wanted to offer participants a choice of

learning topics. This was achieved by having participants select two nutrients from a poster-size Nutrition Facts table that was positioned at the front of the room. "Mini-modules," consisting of a PowerPoint presentation, print resources, and visual demonstrations, were prepared for 10 of the 14 nutrients that typically appear on the Nutrition Facts table. Thus, the two "mini-modules" that were to be presented to each group would be selected by the participants themselves, and program content would then vary from audience to audience. The multi-media format of each "mini-module" was intended to appeal to the varied learning preferences of the participants.

Program Evaluation

The "In-the-Know About Nutrition" program was implemented with 2 groups of seniors and 12 program evaluation forms were returned. When asked to use a 5-point hedonic, "happy face" rating scale to indicate overall program enjoyment (where 5 is the most favorable score), participants gave the program a score of 4.6. Furthermore, 10 of 11 (90.9%) participants indicated that they had learned new information from the program, although only 4 of 9 (44.4%) participants indicated that they planned on making dietary changes based on what they learned. Several participants included positive comments about the program on their evaluation form. One participant stated that she felt better equipped to understand Nutrition Facts tables following the program, while others said how the visual demonstrations representing the fat content in popular snack foods was beneficial.

What I Learned From This Experience

This experience has taught me several lessons about program development and implementation, some of which may be relevant to diabetes educators. These lessons include:

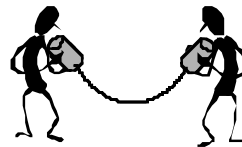
- 1. The importance of time management.** Although I had originally planned on discussing two nutrients during each presentation, I only had time to thoroughly cover one. I could have avoided this mishap by presenting only the information that would be most relevant to participants and by increasing my rate of delivery.
- 2. It's all about the learner!** While a didactic approach to program delivery is certainly easier for the teacher/facilitator, I learned that this style is often the least beneficial to the learner. I believe

that I could have engaged the audience more by incorporating more opportunity for hands-on learning and application of new knowledge. In essence, less of me talking and more audience participation would be ideal.

- 3. Learning can and should be fun!** Unlike youth in academics, adult learners who participate in special interest programs are often not doing so for credit and, therefore, need additional incentive to stay focused. And while I, as a nutrition student, may find nutrition-related information fascinating in any form, I must remember that not everyone is as riveted by it! As such, I learned that it is important to incorporate humor into an educational program and offer opportunity for participants to share their stories. Also, a little friendly competition is always a good thing, and my program could have benefited from a group activity that played one small group of participants against another.

In summary, this was a great learning experience, and I am fortunate to be taking away new skills and tools that will help me to deliver better health- and nutrition-related educational programs in the future. My thanks go out to everyone who provided me with guidance during this process!*

Fran Martin
Dietetic Intern, DCPNS



DCPNS SUMMER 2006 PHONE SURVEY RESULTS

During August and early September of this year, DCPNS staff contacted all Nova Scotia Diabetes Centres (DCs) to obtain information in three areas:

1. Programs/approaches used with the prediabetes population.
2. Uptake and adherence to the *DCPNS Guidelines for Blood Pressure Monitoring and Education through Nova Scotia Diabetes Centres* as released in February 2005.
3. Uptake and adherence to the *DCPNS Draft Triage Guidelines for Initial and Follow-Up Appointments in Diabetes Centres (DCs) in Nova Scotia*.

The information gained through the surveys will be used to inform the future direction of the DCPNS Best Practice Committee as it relates specifically to

prediabetes programming as well as current/future work related to DCPNS guideline development and dissemination.

A total of 29 of the eligible 35 DCs (we excluded the specialty IWK Health Centre Programs—Pregnancy and Pediatrics as well as the two federally-funded programs—Eskasoni and Stadacona) provided information during scheduled times to conduct the phone survey. We remain hopeful that we can complete the data collection with information from the remaining six programs in the near future.

Prediabetes Programming:

- All 29 DCs provide either group or individual counseling to this population. Twenty-one (21) of the 29 DCs offer some form of group education. In three of these DCs, people with prediabetes attend type 2 diabetes classes (survival or other). Most prediabetes classes are delivered within 90 to 120 minutes. One program provides a series of three, 3-hour sessions in a ten week period.
- Twenty-two (22) of the 29 DCs conduct an individual assessment in addition to the group program (with nine using the DCPNS Prediabetes Client Mailed Self-Assessment form).
- Twenty-seven (27) of the 29 DCs access blood work before/during the initial education/assessment period.
- Of those DCs delivering a group program (21), all but two do so with a nurse and dietitian team. In two DCs, the dietitian delivers the program. In one DC, additional team members are part of the program (a psychologist and a physiotherapist).
- Most DCs (21 of 29) provide individual follow-up. Follow-up (time until and time between visits) varies across DCs.
- The blood work requested as part of the follow-up varies by site with some DCs ordering routine blood work (as per type 2 diabetes) with others focused on only lipids and fasting glucose.
- The targets (BP and lipids) used by all programs are the same as those for the diagnosed diabetes population.
- Seven (7) of the 29 DCs instruct in self-monitoring of blood glucose.
- Twelve (12) of the 29 DCs discharge the prediabetes population between 6 and 12 months
- Twenty-two (22) of the 29 DCs use *Just the Basics* as a nutrition-teaching tool, and 17 use *Canada's Fitness Guide* to promote activity/exercise.
- Seventeen (17) DCs promote some form of linkage to community resources.

- None of the DCs have established formalized community partnerships in the delivery of the prediabetes program.

Observations

All DCs provide some form of prediabetes programming (individual and/or group). The approach to individual assessment, required blood work, and follow-up/discharge is variable. Targets require some refinement to better reflect the needs of this heterogeneous population. There is a need to better define community supports and build/use community partners in the delivery of prediabetes initial and ongoing programming/support.

Hypertension Guidelines:

- All 29 DCs were fairly uniform in the measuring, recording, and reporting of blood pressure values.
- Eleven (11) of the 29 DCs are now using/have access to an electronic blood pressure monitor.
- Five (5) of the 29 DCs have incorporated/delivered the DCPNS Blood Pressure Module. The content is team delivered (nurse and dietitian).
- Only four DCs review population blood pressure values (annually/semi-annually) by way of audits or use of the DCPNS indicator report.
- Two (2) DCs have implemented specific intervention to address blood pressure as a result of the population figures.
- Three (3) DCs report partnerships to introduce blood pressure initiatives.
- Ten (10) DCs promote community resources to assist in blood pressure management.

Observations

Few DCs have attempted to address blood pressure concerns outside their usual DC approach (in an existing class on complications or with existing materials). Audits to understand the magnitude of the local problem are seldom used. There is a need to develop community partnerships and use community resources in the development and delivery of blood pressure initiatives.

Triage Guidelines:

Information on this aspect of the phone survey will be shared in a subsequent newsletter.*

Peggy Dunbar, MEd PDt CDE
Coordinator, DCPNS

Educator Sharing

HEALTH LITERACY INTERSECTORAL ACTION STRATEGY PLANNING WORKSHOP

On Monday, May 15, 2006, I attended the Health Literacy Intersectoral Action Strategy Planning Workshop in Dartmouth, Nova Scotia. The purpose of this workshop was to communicate ways of promoting and sustaining an intersectoral strategy for health literacy in Nova Scotia and to identify action areas. The following is a brief synopsis of the major themes that emerged from the workshop along with highlights of select health literacy initiatives currently underway across Nova Scotia.

What is Health Literacy?

There are numerous definitions of health literacy; however, the more minimalist definitions that relate health literacy solely to a person's ability to read and comprehend written medical instructions have been largely abandoned. A definition that has been adopted by several speakers at the workshop describes health literacy as "the degree to which people are able to access, understand, appraise and communicate information to engage with the demands of different health contexts in order to promote and maintain good health across the life-course."¹ This definition illustrates that health literacy extends beyond the functional abilities of reading, writing, and speaking and that it can truly impact on both individual health and population health promotion. In fact, literacy is one of the most important determinants of health, with literacy skills predicting personal health status more accurately than any other socio-economic variable.²

What Are the Impacts of Low Health Literacy?

Canadians with lower literacy skills are less likely to be employed and more likely to live in poverty than are Canadians with higher literacy skills.³ Canadians with lower literacy skills are also less likely to live in healthy physical environments, to consume a healthy diet, or engage in adequate physical activity.³ Finally, Canadians with lower literacy skills are overall less healthy and do not live as long as Canadians with higher literacy skills.³

Cross-sectional data from the International Adult Literacy and Skills Survey indicates that 42% of

Canadians and 50% of Nova Scotians have limited literacy skills.⁴ Furthermore, only about 20% of Nova Scotian seniors have the minimum level of literacy required for daily activities.⁴ Thus, a great proportion of Nova Scotians could have difficulties accessing health care programs, following diet and physical activity plans, deciphering between multiple prescriptions, or communicating their needs to health care providers because of low health literacy skills or language barriers.

What Does This Mean to Health Educators?

The primary message that was delivered during the workshop is that health educators must continue to be cognizant of, and sensitive to, the personal circumstances of each of their clients. There is a tremendous stigma associated with low literacy skills, and many people who struggle to communicate may hesitate to seek health care due to embarrassment or shame. By implementing strategies that better accommodate people with lower literacy skills, some of the inequities in health care may dissipate. For example, rather than have new clients independently fill out information forms, a staff member could offer to administer the questions orally. Those clients with higher literacy skills would likely opt to fill out the form on their own, while those who struggle to read and write will be saved from undue stress and embarrassment. This method would also ensure that all pertinent information is exchanged from client to health educator. Similarly, health educators are encouraged to use and/or develop resources that rely on a medium other than print for those clients who have difficulties reading. Audio and video materials could relay identical health messages to a traditional form or pamphlet.

What Initiatives are Taking Place in Nova Scotia?

- The Guysborough Antigonish Strait Health Authority (GASHA) used local research findings to initiate a project to increase primary health care providers' awareness of health literacy issues. GASHA has since implemented a Health Literacy Policy.
- A Health Literacy "Roadshow" was offered throughout DHAs 1, 2, and 3 in early 2005. Workshops were offered to health care providers in these districts to increase awareness of health literacy issues.
- The Richmond County Literacy Network has recently been involved in a major health literacy initiative. Presentations were made to 12 seniors

groups and 6 groups of health care providers to highlight the seriousness of health literacy. A Community Resource Directory was also created with over 4800 copies distributed to every household in Richmond County.

- The Nova Scotia Seniors' Secretariat is preparing a health literacy learning manual for older adults to be used by Community Learning Networks.
- Community Health Information and Interpreting Service (CHIIS) is a non-profit community-based organization that provides community health interpreting services. CHIIS community health interpreters facilitate oral communication between health care providers and patients from diverse linguistic and cultural backgrounds.

Many workshop participants stressed the importance of engaging government in literacy initiatives. It was strongly suggested that concerned parties approach their local Community Health Board which links the community to their DHA. Finally, the notion of developing a Provincial "Literacy Secretariat" was introduced numerous times. This would help to link the many literacy-related organizations, programs, and resources available across Nova Scotia.*

Fran Martin
Dietetic Intern, DCPNS

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1. B.C Health Literacy Research Team 2006.
2. Ronson B, Rootman I. Literacy: One of the most important determinants of health today. In: Raphael D. Ed. *Social determinants of health: Canadian Perspectives*. Toronto, ON: Canadian Scholars Press; 2004.
3. Federal, Provincial and Territorial Advisory Committee on Population Health for the Meeting of Ministers of Health, Charlottetown, PEI, September 1999. *Toward a Healthy Future: Second Report on the Health of Canadians (1999)*. Available from the Public Health Agency of Canada at: <http://www.phac-aspc.gc.ca/ph-sp/phdd/report/subin.html>
4. Human Resources and Skills Development Canada and Statistics Canada. *Building on our Competencies: Canadian Results of the International Adult Literacy and Skills Survey (2003)*. Available from the Government of Canada at: [http://www.sdc.gc.ca/asp/gateway.asp?hr=/en/hip/lld/nls/Publications/E/publicationE.shtml&hs=1xa](http://gateway.asp?hr=/en/hip/lld/nls/Publications/E/publicationE.shtml&hs=1xa).

**HEALTHY EATING
NOVA SCOTIA**

Healthy Eating Nova Scotia (HENS) is a strategic plan to address the high rates of diet-related chronic disease being seen in this province. It is a planning framework, based on a population health approach, to guide coordinated, evidence-based action, decisions, and resource allocation on nutrition and healthy eating. The *HENS* strategy was developed by the Healthy Eating Action Group of the NS Alliance of Healthy Eating and Physical Activity through consultations with government and non-government organizations, private corporations, and professional organizations. As part of a coordinated movement, the *HENS*, Tobacco, and Physical Activity Strategies will focus on improving the health of all Nova Scotians. The *Strategy* serves to address one of the four areas of emphasis recommended in the Nova Scotia Chronic Disease Prevention Strategy. The *HENS* strategy has four guiding principles – integration, partnership and shared responsibility, best/promising practices, and capacity.

The *HENS* strategy is designed to be used by all healthy eating stakeholders such as government, policy makers, District Health Authorities (DHAs), Community Health Boards, non-profit organizations, community-based organizations, health and education professionals, researchers and academics, and the food industry. The goals of the *HENS* strategy are to reduce health disparities and to improve health outcomes. Four priority areas have been identified – **breastfeeding, children and youth, fruit and vegetable consumption, and food security**. These priority areas were chosen after a thorough literature review. The following statistics illustrate why these areas require attention:

- Sixty-seven percent (67%) of Nova Scotia women breastfeed upon discharge compared to the Canadian breastfeeding initiation rate of 76% (Reproductive Care Program of Nova Scotia and Canadian Community Health Survey, 2001).
- Twenty-nine percent (29%) of Nova Scotians over the age of 12 consume the recommended 5-10 servings of fruits and vegetables compared with 35% nationally (Stats Canada, 2004).
- Seventeen percent (17%) of Nova Scotia households experience food insecurity (Canadian Community Health Survey, 2001).
- Approximately 16% of families are living in poverty in Nova Scotia (National Council of Welfare, 2004).

- Approximately 59% of Canadians 18 years and older are overweight or obese (Statistics Canada, 2004).
- Twenty-three percent (23%) of Canadian adults are obese, while 19% of Nova Scotia's males are obese and 30% of Nova Scotia's females are obese (Statistics Canada, 2004).
- Thirty-two percent (32%) of Nova Scotian children aged 2-17 are overweight or obese, compared to the National average of 26% (Statistics Canada, 2004).

Work is being done within these four priority areas through the dedication and commitment of provincial and local actions. To date, *HENS* has been instrumental in the development of the provincial Breastfeeding Policy, supporting a participatory food costing study, and the development of a draft School Food and Nutrition Policy for Nova Scotia Public Schools. As part of the implementation of *HENS*, funding was provided to the DHAs for each to hire an additional public health nutritionist.

The Department of Health Promotion and Protection is providing leadership for the implementation of *Healthy Eating Nova Scotia*. If you would like to learn more about *HENS* or to download a copy of the strategy please visit <http://www.gov.ns.ca/hpp/>.*

Amy MacDonald, PDt (MHSc Candidate)
Student, Healthy Eating, Nova Scotia
Health Promotion & Protection



NOVA SCOTIA DIABETES ASSISTANCE PROGRAM UPDATE

Overview

The Nova Scotia Diabetes Assistance Program (NSDAP) has been operational since January 2006 and has been automated since May 2006. Approximately 1700 Nova Scotians are currently registered in the program. There may yet be uninsured Nova Scotians with diabetes who are eligible to receive benefits, so communications about the Program remains a priority. We will be sending a more complete package of information to Diabetes Centres (DCs) in the coming weeks.

Fall is Renewal Time for the NSDAP

All people who registered in the NSDAP between December 2005 and August 31, 2006 must renew their registration status for the upcoming calendar year. Pharmacare notifies all registrants of this by mailing them a renewal package each September. To renew, registrants must provide Pharmacare with updated information on family size and annual family income. This is done by filling out Section A (the first page) of the NSDAP registration form and submitting it to Pharmacare by mail. The renewal submission must include a copy of the most recent Notice of Assessment from Canada Revenue Agency for each income-earning member of the family.

NSDAP Evaluation

The evaluation of the self-care component of the NSDAP has been underway since the spring. In order to reach the required sample size for analysis, we need another 300 participants. We are asking for help from the DC staff in this process. DC staff can help to inform potential program registrants of the importance of their participation when they are telling them about the program and/or assisting with completion of the registration form. Staff can also answer any questions that registrants may have with regard to this evaluation. Registrants should know that:

- There is no cost to participate
- That the evaluation is conducted by phone and the phone interview will be set at a time convenient to the participant.
- There is no judgment made on the individual's diabetes care or knowledge.

Participants should also know that what is learned from the evaluation could help others enrolled in the NSDAP and also benefit similar assistance programs in other parts of Canada.

A New Pharmacare Program: Low Income Pharmacare for Children

The Nova Scotia Department of Community Services has recently launched a new Pharmacare program to meet the needs of children whose families do not have access to private insurance.

As with all Pharmacare programs, there are eligibility criteria. To be eligible, the child must be under the age of 18, the annual family income must be less than \$20,921, and the child's guardian must

already receive the Nova Scotia Child Benefit from Canada Revenue Agency. The Nova Scotia Child Benefit is only available to those who submit an income tax return. All families who are eligible for the new Low Income Pharmacare for Children will automatically receive an application form in the mail from the Canada Revenue Agency.

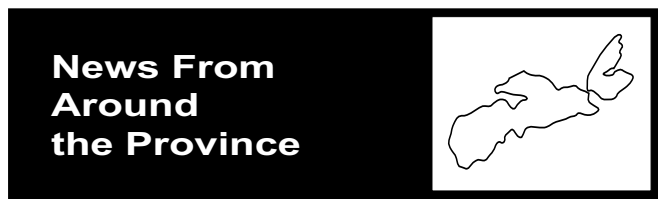
For those families that do qualify, the benefits of the Low Income Pharmacare for Children program are substantial. There is no deductible, and the co-pay is attractive. Prescriptions for items on the Nova Scotia Pharmacare Formulary are only \$5 each.

If any children with diabetes who are registered in the NSDAP also qualify for the Low Income Pharmacare for Children, it would likely be a good choice to switch to the Low Income Pharmacare for Children as there is no deductible for this program and the co-pay is preset (as above).

For families with both adults and children who have diabetes, the child could be enrolled in the Low Income Pharmacare for Families and the adult could be enrolled in the NSDAP. In such a case, the child would still contribute to the family size for the NSDAP, but would not be a beneficiary of the NSDAP.

Additional information regarding communications will be mailed from DCPNS to the DCs by the end of October 2006. If you have specific questions about the DAP, please let me know as the answers to these questions could help to inform our communication piece. Please feel to contact me directly at (902) 473-2622.*

Lisa Tay
Project Manager, NSDAP



New Faces

Welcome to:

- **Trish MacLeod, PDt.** Trish joins the staff of the Colchester Regional Hospital Diabetes Centre, Truro.

- **Paula Canning, PDt.** Paula returns to the IWK Health Sciences Centre, Children and Adolescents with Diabetes Program following her year-long maternity leave.
- **Jennifer Boswall, RN.** Jennifer joins the staff of the Digby General Hospital DC.
- **Nancy Price, RN and Terri Delisle, PDt.** Nancy and Terri are now the Diabetes Educators at the Annapolis Community Health Centre DC.
- **Loralee Sibley, RN.** Loralee is now the Diabetes Nurse Educator for the DCs in the tri-facilities of Eastern Shore Memorial Hospital, Musquodobit Valley Memorial Hospital, and Twin Oaks/Birches Continuing Care Centre.

Our very best wishes to **Lynne Barteaux, RN** on her retirement from the Annapolis Community Health Centre DC.

Please remember if you have a change in any staff (professional or clerical) to let the DCPNS office know ASAP to ensure our contact list remains current. Thanks!

Certified Diabetes Educators (CDEs)

Congratulations to our new or recertified CDEs:

- **Janice Smith, RN,** IWK Health Sciences Centre, Children and Adolescents with Diabetes Program.
- **June Tate, RN,** St. Mary's Memorial Hospital DC.
- **Marilyn Snell, RN,** Guysborough Memorial Hospital, DC.
- **Ann Lohnes, PDt,** Valley Regional Hospital DC.
- **Debbie MacMillan, RN,** Valley Regional Hospital DC.

What's New at the



Diabetes Month:

November is Diabetes Awareness Month; and once again, the Canadian Diabetes Association is raising awareness of the seriousness of diabetes. This year, we are alerting Canadians to the urgency of diabetes by

informing them of the connection to heart disease. A notable change from last year is that we will not be holding a blitz day. The focus this November will be on media activities, including media relations and purchased media such as transit advertising and supplements in *MacLean's* magazine and the *National Post*. Here in Nova Scotia the Canadian Diabetes Association has several educational activities happening for Diabetes Month, including the following free information sessions:

- November 2, 2006 (Kentville) - Preventing and Reversing Hardening of the Arteries.
- November 8, 2006 (Halifax) - Diabetes and Heart Health.

Research Night:

We are pleased to be hosting a Research night with Donna Lillie. Donna Lillie is the Vice President of Research and Professional Education at the Canadian Diabetes Association. The research night will take place on November 16th at 7p.m. in Halifax. The Location is to be determined. For more information, or to register for this free information session, contact the Canadian Diabetes Association at **1-800-326-7712**.

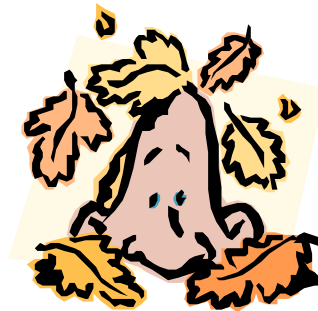
Diabetes Expo:

Planning for our Diabetes Expo, to be held on April 28, 2007 at the Membertou Convention Centre in Sydney, continues to go well. The Expo Committee has chosen Dr. Ian Blumer as our plenary speaker. Breakout Sessions and Ask the Expert Booths have yet to be determined. The brochure will be distributed early in the New Year. If you are interested in being a presenter or helping to man an Ask the Expert Booth, please contact Marie Brown at the Canadian Diabetes Association at 1-902-453-3230 or 1-800-326-7712, Ext. 3230.*

News From Industry**

Trudy Murphy of Sanofi-Aventis is pleased to announce Lantus is now available in 3.0 mL cartridges (100 U/mL) for use with the new Autopen® 24 insulin injection pen. Two pens are available—one that dials up to 42 units per injection in 2-unit increments (blue pen), and the other that dials up to a maximum of 21 units per injection in 1-unit increments (green pen). For more information, contact Trudy Murphy 233-3179 or Paul Burke 430-6799.*

***This information has been brought to our attention to share with educators around the province. Endorsement is not implied by appearance in the newsletter.*



The End!

