MNCHP Network Bulletin



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by/par health nexus santé

The MNCHP Bulletin is a bi-weekly electronic bulletin that highlights current trends, new resources and initiatives, upcoming events and more in the preconception, prenatal and child health field. Our primary focus is the province of Ontario, Canada but the Bulletin also includes news & resources from around the world. Wherever possible, we include resources that are available for free. For more information about this Bulletin, click here.

October 19, 2012

Special Topic Bulletin: Early Brain Development

This week's bulletin provides an overview of early brain development and includes news articles, recent reports and studies, resources, and links to organizations and programs working in this area. This selection of information is based on a preliminary scan and is not exhaustive. We invite you to share other relevant information about this topic.

Why the Focus on Early Brain Development?

Over the past few decades, discoveries in the fields of neurobiology and genetics, alongside advances in the social sciences, have led to a much richer understanding of human brain development. From the moment of conception, a combination of genes and external factors (early experiences and environments) affects how genes are expressed (also known as epigenetics), and how brain connections are built. While the brain remains capable of change throughout life (the concept of neuroplasticity), there is an established window of time in early in life that is considered critical. This early sensitive period poses great opportunities and risks to the developing brain. Science has shown that the influence of these early experiences, positive and negative, affects the quality of the brain's connections, the very foundation for lifelong learning, behaviour and health.

A healthy pregnancy, caring, responsive relationships, and safe, supportive environments in the earliest years support optimal brain development. Extreme, chronic adversity, also referred to as toxic stress, can interrupt or weaken normal brain development, as well as the body's cardiovascular, immune and stress response systems, and metabolic regulatory controls, increasing the risk of lifelong physical and mental health problems

Fortunately early identification and intervention can prevent or reverse the adverse consequences of toxic stress. Investments upfront, particularly for families and children at risk, are more effective and affordable than efforts to address resulting problems later in life.

Wide ranging programs and policies to support families and children from conception through the early years can enhance the relationships and conditions needed for optimal brain development, with lifelong benefits for learning, behaviour and health.

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I. BRAIN DEVELOPMENT IN THE NEWS

1. 10 surprising brain builders for preschoolers

When we think about brain power, we tend to think about intelligence and knowledge. But what really sets a child up for learning, life skills — even being happy — is a set of abilities that psychologists call executive function.

http://www.todaysparent.com/activities/10-surprising-brain-builders-preschoolers

2. Childhood stimulation key to brain development, study finds

An early childhood surrounded by books and educational toys will leave positive fingerprints on a person's brain well into their late teens, a two-decade-long research study has shown. Scientists found that the more mental stimulation a child gets around the age of four, the more developed the parts of their brains dedicated to language and cognition will be in the decades ahead. <a href="http://www.guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development?CMP=twt_guardian.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-development.co.uk/science/2012/oct/14/childhood-stimulation-key-brain-developm

3. Unlocking Our Potential

U of T researchers suggest life's early years might be even more important than we thought. http://www.magazine.utoronto.ca/feature/early-childhood-institute-for-human-development-stephen-lye/

4. Why the first 2,000 days of a child's life are the most important

The Fraser Mustard Institute for Human Development, named for the late advocate of early childhood development, pulls together researchers from a wide range of fields under a virtual umbrella to tackle a wide range of issues. They'll team up on research and teaching that focuses on the first 2,000 days of a child's life – from conception to age five – in the hopes of pinpointing ways to set children on positive life trajectories.

http://www.theglobeandmail.com/life/parenting/why-the-first-2000-days-of-a-childs-life-are-the-most-important/article4572762/

5. Does a parent's education and income affect how a child's brain develops?

Among the studies showing correlations between a child's early home environment and later brain development that were presented this week at the annual meeting of the Society for Neuroscientists, one stood out as particularly startling.

It was the analysis that showed a correlation between a parent's income and education level to development in specific areas of the brain essential to learning, memory and stress processing. http://www.washingtonpost.com/blogs/on-parenting/post/does-a-parents-education-and-income-affect-how-a-childs-brain-develops/2012/10/17/8715e348-187c-11e2-a55c-39408fbe6a4b blog.html

6. How Early Social Deprivation Impairs Long-Term Cognitive Function

A growing body of research shows that children who suffer severe neglect and social isolation have cognitive and social impairments as adults. A study from Boston Children's Hospital shows, for the first time, how these functional impairments arise: Social isolation during early life prevents the cells that make up the brain's white matter from maturing and producing the right amount of myelin, the fatty "insulation" on nerve fibers that helps them transmit long-distance messages within the brain. The study also identifies a molecular pathway that is involved in these abnormalities, showing it is disrupted by social isolation and suggesting it could potentially be targeted with drugs. Finally, the research indicates that the timing of social deprivation is an important factor in causing impairment. The findings are reported in the September 14th issue of the journal Science.

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http://neurosciencenews.com/how-early-social-deprivation-impairs-long-term-cognitive-function-oligodendrocytes-myelin/

7. Tough times in childhood 'mark' many genes

Tough times during childhood result in a broad change in the way our DNA is "epigenetically" chemically marked in the brain by a coat of small chemicals called methyl groups, according to researchers at McGill University.

"Our data highlights the immense importance of the social environment during childhood and illustrates the profound consequences of child adversity on the way our DNA is programmed," says Moshe Szyf, a professor of pharmacology and therapeutics and a fellow of the Canadian Institute for Advanced Research (CIFAR).

http://www.futurity.org/health-medicine/tough-times-in-childhood-mark-many-genes/

II. KEY DOCUMENTS

8. Ontario Early Years Study 1, 2, 3

Hon. Margaret Norrie McCain, J. Fraser Mustard, Kerry McCuaig Early Years Study 1 (April, 1999)

The seminal *Early years study: Reversing the real brain drain* (1999) describes the critical importance of children's early interactions in shaping their development.

http://earlyyearsstudy.ca/media/uploads/more-files/early-years-study-en.pdf

Early Years Study 2 (March, 2007)

Early years study 2: Putting science into action (2007) focused on the policy framework necessary to improve conditions in early childhood, with a view of improving the health of the population. http://earlyyearsstudy.ca/media/uploads/more-files/early_years_study2-en.pdf

Early Years Study 3 (November 2011)

The Early Years Study 3 documents the social, economic and scientific rationale for increased investments in early childhood education. It also introduces the Early Childhood Education Report to monitor the funding, policy, access and quality of early education programming. http://earlyyearsstudy.ca/media/uploads/report-pdfs-en/i 115 eys3 en 2nd 072412.pdf

9. From Neurons to Neighborhoods: The Science of Early Childhood Development, Update, 2012

In late 1998, the National Research Council (NRC) and Institute of Medicine (IOM) Committee on Integrating the Science of Early Childhood Development brought together 17 leading authorities on human development and neuroscience for an unprecedented review of the existing knowledge base on early childhood. In October 2000, their effort culminated in the publication of a landmark report, *From Neurons to Neighborhoods: The Science of Early Childhood Development*, whose broad scope attracted impressive reviews and widespread accolades. Edited by Center Director Jack P. Shonkoff and Deborah A. Phillips and published by National Academy Press, *From Neurons to Neighborhoods* presents important findings about the effects of genetics, environment, and early stress on brain architecture, and the costs and benefits of intervention.

http://search.nap.edu/napsearch.php?term=From+Neurons+to+Neighborhoods&x=12&y=5

10. National Scientific Council on the Developing Child: Reports & Working Papers

To serve the Council's primary goal of bringing credible and accurate knowledge to bear on public decision-making that affects the lives of young children, a series of publications has been created to marry the science of early childhood and brain development with state-of-the-art communications research designed to effectively translate that knowledge for non-scientific audiences. All of the media products created at the Center on the Developing Child have been crafted with the goal of helping to close the gap between what experts know about the science of early childhood and what the public understands and does about it. The Center strives to present information, especially scientific information, in a way that is accessible to a wide range of readers. It includes videos, reports and working papers, articles and books as well as interactive features. http://developingchild.harvard.edu/resources/

11. Early Brain Development, Parent Knowledge in Ontario

This report describes data from the Best Start Resource Centre 2011 Ontario survey of parental knowledge about early brain development. The survey examined the attitudes and knowledge of parents of children aged 0-6 years, the information sources they relied on, and the information and resources they would find most useful related to early brain development. Survey results will help

service providers think about populations of interest, key messages and effective strategies to promote early brain development. This report serves as a baseline for future surveys that examine Ontario trends in parental awareness and knowledge related to early brain development. http://www.beststart.org/resources/hlthy_chld_dev/pdf/Early_brain_development_fnl.pdf

III. RECENT REPORTS AND RESEARCH

12. Neural correlates of socioeconomic status in the developing human brain *

K. Noble et al.

Developmental Science, Volume 15, Issue 4, pages 516-527, July 2012

Socioeconomic disparities in childhood are associated with remarkable differences in cognitive and socio-emotional development during a time when dramatic changes are occurring in the brain. Yet, the neurobiological pathways through which socioeconomic status (SES) shapes development remain poorly understood. Behavioral evidence suggests that language, memory, social-emotional processing, and cognitive control exhibit relatively large differences across SES. Here we investigated whether volumetric differences could be observed across SES in several neural regions that support these skills. In a sample of 60 socioeconomically diverse children, highly significant SES differences in regional brain volume were observed in the hippocampus and the amygdala. In addition, SES x age interactions were observed in the left superior temporal gyrus and left inferior frontal gyrus, suggesting increasing SES differences with age in these regions. These results were not explained by differences in gender, race or IQ. Likely mechanisms include differences in the home linguistic environment and exposure to stress, which may serve as targets for intervention at a time of high neural plasticity.

http://onlinelibrary.wiley.com/doi/10.1111/j.1467-7687.2012.01147.x/abstract

13. A Critical Period for Social Experience–Dependent Oligodendrocyte Maturation and Myelination *

Manabu Makinodan, Kenneth M. Rosen, Susumu Ito, Gabriel Corfas Science, Vol. 337 No. 6090, 14 September 2012.

Early social isolation results in adult behavioral and cognitive dysfunction that correlates with white matter alterations. However, how social deprivation influences myelination and the significance of these myelin defects in the adult remained undefined. We show that mice isolated for 2 weeks immediately after weaning have alterations in prefrontal cortex function and myelination that do not recover with reintroduction into a social environment. These alterations, which occur only during this critical period, are phenocopied by loss of oligodendrocyte ErbB3 receptors, and social isolation leads to reduced expression of the ErbB3 ligand neuregulin-1. These findings indicate that social experience regulates prefrontal cortex myelination through neuregulin-1/ErbB3 signaling and that this is essential for normal cognitive function, thus providing a cellular and molecular context to understand the consequences of social isolation.

http://www.sciencemag.org/content/337/6100/1357

14. Socioeconomic status and the brain: mechanistic insights from human and animal research

Meaney M., Hackman D., Farah M.

Nature Reviews. Vol. 11., 651-659. © Nature Publishing Group: doi:10.1038/nrn2897

Abstract

Human brain development occurs within a socioeconomic context and childhood socioeconomic status (SES) influences neural development — particularly of the systems that subserve language and executive function. Research in humans and in animal models has implicated prenatal factors, parent—child interactions and cognitive stimulation in the home environment in the effects of SES on neural development. These findings provide a unique opportunity for understanding how environmental factors can lead to individual differences in brain development, and for improving the programmes and policies that are designed to alleviate SES-related disparities in mental health and academic achievement.

http://tinyurl.com/9gx7zh2

15. Factors underlying variable DNA methylation in a human community cohort

Lucia L. Lam, Eldon Emberly, Hunter B. Fraser, Sarah M. Neumann, Edith Chen, Gregory E. Miller1, and Michael S. Kobor

Epigenetics is emerging as an attractive mechanism to explain the persistent genomic embedding of early-life experiences. Tightly linked to chromatin, which packages DNA into chromosomes, epigenetic marks primarily serve to regulate the activity of genes.

DNA methylation is the most accessible and characterized component of the many chromatin marks that constitute the epigenome, making it an ideal target for epigenetic studies in human populations. Here, using peripheral blood mononuclear cells collected from a community-based cohort stratified for early-life socioeconomic status, we measured DNA methylation in the promoter regions of more than 14,000 human genes. Using this approach, we broadly assessed and characterized epigenetic variation, identified some of the factors that sculpt the epigenome, and determined its functional relation to gene expression.

We found that the leukocyte composition of peripheral blood covaried with patterns of DNA methylation at many sites, as did demographic factors, such as sex, age, and ethnicity. Furthermore, psychosocial factors, such as perceived stress, and cortisol output were associated with DNA methylation, as was early-life socioeconomic status. Interestingly, we determined that DNA methylation was strongly correlated to the ex vivo inflammatory response of peripheral blood mononuclear cells to stimulation with microbial products that engage Toll-like receptors. In contrast, our work found limited effects of DNA methylation marks on the expression of associated genes across individuals, suggesting a more complex relationship than anticipated.

http://www.pnas.org/content/109/suppl.2/17253.full.pdf+html

IV. PRESENTATIONS

16. A Science-Based Framework for Early Childhood Policy



Jack P. Shonkoff, M.D., August 2007

http://developingchild.harvard.edu/index.php/resources/reports_and_working_papers/policy_framework/

17. Healthy Baby Healthy Brain – Bilingual, Ready-to-use Workshop and DVD

A DVD containing 15 short videos for parents on brain development. These videos are the ones presented on the website www.HealthyBabyHealthyBrain.ca. A facilitator guide is included. This guide contains suggestions to offer parents a workshop on brain development. http://www.beststart.org/healthybabyhealthybrain/campaign_components.html

18. Early Years Study 3 Powerpoint Presentations

Downloads available of presentation of animated images derived from Study figures and figures from the Study

http://earlyyearsstudy.ca/en/more/

V. RESOURCES FOR SERVICE PROVIDERS

19. Healthy Baby Healthy Brain Campaign

The main focus of the campaign is to provide parents with information on important actions they can take to foster their baby's brain development. A key objective of the campaign is to increase service providers access and use of evidence-based resources for parents to support early brain development, in French and in English.

As well as a website directed at parents, other campaign resources include fridge magnets, tear off information sheets, ready to use workshop & DVD, tv and radio PSA announcements for local media coverage as well as web buttons to add to websites.

http://www.beststart.org/healthybabyhealthybrain/campaign_components.html

20. Center on the Developing Child at Harvard University

The Center on the Developing Child at Harvard University was founded in 2006 on the belief that the vitality and sustainability of any society depend on the extent to which it expands opportunities early in life for all children to achieve their full potential and engage in responsible and productive citizenship. We view healthy child development as the foundation of economic prosperity, strong communities, and a just society, and our mission is to advance that vision by using science to enhance child well-being through innovations in policy and practice.

http://developingchild.harvard.edu/index.php/resources/briefs/inbrief_series/inbrief_the_science_of_ecd/

21. Podcast: Creating Healthy Connections: Nurturing Brain Development From Birth to Three



In this podcast, Dr. Alison Gopnik vividly describes a number of compelling recent research studies that illustrate how very young children's brains develop and how parents can use that information to nurture their children's healthy development.

Dr. Gopnik is a professor of psychology and affiliate professor of philosophy at the University of California at Berkeley, as well as author of The Philosophical Baby and co-author of The Scientist in the Crib: What Early Learning Tells Us About the Mind.

http://www.zerotothree.org/about-us/funded-projects/parenting-resources/podcast/creating-healthy-connections.html

22. Nipissing District Developmental Screen (NDDS)

The *Nipissing District Developmental Screen* (NDDS) is an innovative developmental screening tool for infants and children up to 6 years of age, to be completed by a parent or health/child care professional. Early identification is the first step in early intervention. NDDS has a licensing agreement with the Government of Ontario to make the product free to Ontario residents. http://www.ndds.ca/language.php

23. Ontario's Enhanced 18-Month Well-Baby Visit

This web portal is the result of a collaborative effort between several organizations including the Ontario College of Family Physicians, McMaster University, the Offord Centre for Child Studies, the Ontario Ministries of Children and Youth Services, Health and Long-Term Care, Health Promotion, and leaders in the field of child development. The portal was developed to provide primary care providers a central access point to accredited online learning programs as well as recommended tools like the Rourke Baby Record and the Nipissing District Developmental Screen®, and other key resources. http://machealth.ca/programs/18-month/default.aspx

24. Interactive Baby Brain Map

The Brain Map was adapted in 2006 by **ZERO TO THREE** from BrainWonders, a collaborative project (1998-2001) between Boston University School of Medicine, Erikson Institute and ZERO TO THREE. To get started, users are asked to select an age range from a pull-down menu. Depending on the age range, different hotspots on the brain image will appear. Clicking on a hotspot will reveal questions to find out how a baby's brain develops during this period of brain growth. Suggestions are also offered to learn what you can do to enrich a very young child's development.

http://www.zerotothree.org/child-development/brain-development/baby-brain-map.html

25. Infant Mental Health Promotion

Infant mental health is the social, emotional, and cognitive well-being of infants and young children. Infant mental health practice refers to the promotion of optimal development and well-being in infants (prenatal to age three) and their families, the prevention of difficulties, and intervention when infants are at-risk or have identified problems. The goal of infant mental health services is to ensure optimal child outcomes in terms of a sense of security and self-esteem, and the ability to form satisfying relationships, to engage with the world, to learn, to cope and problem solve, and to continue positive



development throughout life. Infant mental health services strive to promote stable and supportive families and communities.

Infant Mental Health Promotion (IMHP) is a coalition of individuals and professional representatives from agencies concerned with infants and their families. IMHP is dedicated to promoting optimal mental health outcomes for infants through developing and supporting best practices through education and training, dissemination of information, networking and advocacy. http://www.imhpromotion.ca/AboutUs.aspx

VI. RESOURCES FOR PARENTS AND CAREGIVERS

26. Encyclopedia on Early Childhood Development

Key messages: Information sheets available for free download on topics such as: language development, parent child attachment building strong brain structure, understanding crying etc.) http://www.child-encyclopedia.com/en-ca/key-messages-list.html

27. TVOParents: Nurturing Early Brain Development

TVOParents has partnered with the Infant Mental Health Promotion at Toronto's Hospital for Sick Children to educate parents about the importance of healthy brain development in the early years of a child's life.

New Tips and videos from SickKids will be available on a weekly basis for the next year. Chaya Kulkarni, the director of Infant Mental Health Promotion, explains our partnership and why it is so important for parents to nurture early brain development:

http://tvoparents.tvo.org/topic/health-development

28. Your Baby's Development: set of nine, age-based handouts

These include a chart that helps parents know what to expect developmentally from their child, frequently asked questions and answers, a spotlight section that goes into greater depth on a common issue or challenge for each age and a research summary specific to each stage of development, and what it means for parents

http://www.zerotothree.org/about-us/areas-of-expertise/free-parent-brochures-and-guides/age-based-handouts.html

29. Healthy Baby Healthy Brain

The main focus of the **Healthy Baby Healthy Brain** campaign is to provide parents with information on important actions they can take to foster their baby's brain development. These include responding to their baby's needs, interacting with them in a positive way, providing opportunities for learning, etc. Key messages have been defined based on the parent survey results and feedback from parents, topic experts and front line workers. Key messages tie directly to campaign objectives:

• "Start early." Help your baby right from the start.



- "Love builds brains." What your baby needs from you.
- "Playing builds brains." Boosting baby's brain with everyday fun and games.
- "Health builds brains." Health and wellness tips for babies.
- "Baby's world matters." Creating the right environment for healthy brain development.

A bilingual website containing short online videos (15 videos, 2-6 minutes each), that can be downloaded and disseminated through various social media. The videos depict everyday interactions between parents and children and are complemented by professional advice. Additional background information and links to other websites are also provided. Most of the other campaign components will serve to direct parents to this website.

http://www.healthybabyhealthybrain.ca/ http://www.bebeensantecerveauensante.ca/index.htm

30. Ontario's Enhanced 18-Month Well-Baby Visit

Ontario has recognized the importance of the 18-month well-baby visit by funding a longer, more indepth visit with primary health providers. The overall goal of this is to better support the healthy development and well-being of Ontario's children.

It provides information for parents and caregivers about Ontario's Enhanced 18-Month Well-Baby Visit, introduces parents to the Nipissing District Developmental Screen (NDDS) and outlines what to expect at the appointment.

http://public.machealth.ca/programs/18-month/default.aspx

About This Bulletin

The Best Start Resource Centre thanks you for your interest in, and support of, our work. Best Start permits others to copy, distribute or reference the work for non-commercial purposes on condition that full credit is given. Because our MNCHP bulletins are designed to support local health promotion initiatives, we would appreciate knowing how this resource has supported, or been integrated into, your work (mnchp@healthnexus.ca). Please note that the Best Start Resource Centre does not endorse or recommend any events, resources, or publications mentioned in this bulletin.

Other Health Nexus communications:

OHPE - The free weekly Ontario Health Promotion E-mail bulletin (OHPE) offers a digest of news, events, jobs, feature articles on health promotion issues, resources, and much more, to those working in health promotion. https://www.ohpe.ca/

Click4HP - An open, facilitated public listserv, Click4HP is an international dialogue on health promotion. Participants exchange views on issues and ideas, provide leads to resources, and ask questions about health promotion. https://listserv.yorku.ca/archives/click4hp.html

The Maternal Newborn and Child Health Promotion (MNCHP) Network - A province-wide electronic forum for service providers working to promote preconception, prenatal and child health. http://www.beststart.org/services/MNCHP.html

Health Promotion Today / Promotion de la santé aujourd'hui - Our bilingual blog keeps you informed of news and topics related to health promotion. http://www.blogs.healthnexussante.ca/

Follow us on Twitter to stay up to date on all things related to health promotion. https://twitter.com/Health_Nexus

View our video resources on YouTube and Vimeo (http://www.youtube.com/user/healthnexussante, https://vimeo.com/user9493317)



We encourage you visit the website of our new <u>3M Health Leadership Award</u> to find out how you can support community health leadership and honour your own community leader by nominating them for this national award. http://www.healthnexus.ca/leadershipaward

NEW! The Best Start Aboriginal Sharing Circle (BSASC) Network is a distribution list designed for service providers working with Aboriginal Peoples in areas of preconception, prenatal and child health. The network is a forum to share news, ideas, questions and best practices. http://lists.beststart.org/listinfo.cgi/bsasc-beststart.org

En français:

Le bulletin francophone Le Bloc-Notes est un outil indispensable pour les intervenants professionnels qui aiment être à l'affût des nouveautés dans le domaine de la promotion de la santé. http://www.leblocnotes.ca/

Le Bulletin de santé maternelle et infantile est un bulletin électronique mensuel à l'intention des fournisseurs de services œuvrant dans le domaine de la promotion de la santé maternelle et infantile. http://www.meilleurdepart.org/services/bulletins.html

Promotion de la santé aujourd'hui / Health Promotion Today – Notre blogue bilingue sur lequel on partage des nouvelles et réflexions liées à la promotion de la santé. http://www.blogs.healthnexussante.ca/

Suivez-nous sur Twitter pour demeurer au fait de tout ce qui concerne la promotion de la santé. https://twitter.com/Nexus Sante

Visionner nos ressources vidéo sur YouTube et Vimeo (http://www.youtube.com/user/healthnexussante, https://vimeo.com/user9493317)

Nous vous encourageons à visiter le site Web de notre nouveau <u>Prix 3M de leadership en santé</u> pour découvrir de quelle façon vous pouvez appuyer le leadership en santé communautaire et honorer un chef de file de votre milieu en présentant sa candidature à ce prix national. http://www.nexussante.ca/prixdeleadership