What's new in prevention?
News on nutrition, physical activity and weight research

Prevention Research Centres *Newsletter*

Vol 1, Issue 1, Aug 2006

NSW Schools Physical Activity and Nutrition Survey (SPANS)

Full Report Released

A LANDMARK SURVEY, the Schools Physical Activity and Nutrition Survey (SPANS) 2004 has found that a quarter of students from years 2 to 10 are overweight or obese, which represents a steady increase in the proportion of students who are overweight or obese since 1985.

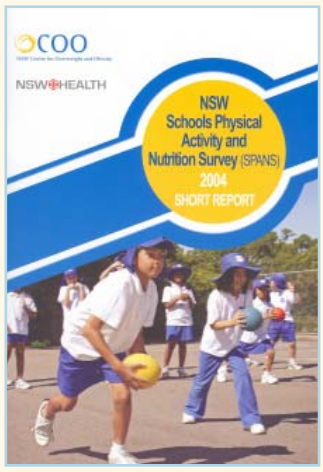
The survey was released by the NSW Premier on May 24th 2006.

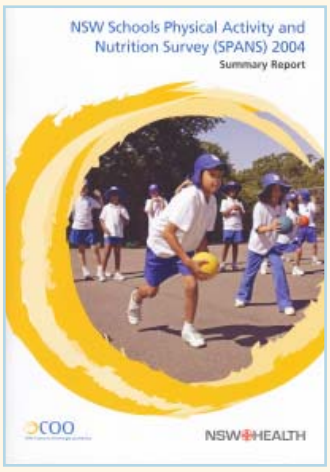
There are three reports:

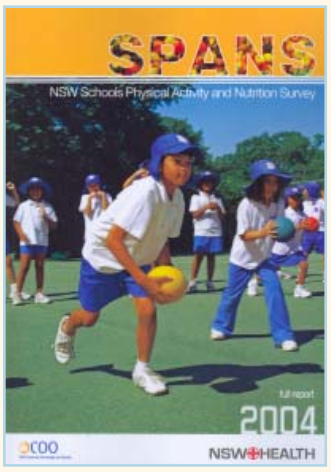
SPANS Short Report
An easy to read version mainly for teachers, parents and young people

SPANS Summary Report
A snapshot of the results mainly for policy makers and professionals who work in the field

SPANS Full Report
A full technical report aimed at academics and researchers







CONTACT US

COO
NSW Centre for Overweight and Obesity
www.coo.health.usyd.edu.au

CPAH
Centre for Physical Activity and Health
www.cpah.health.usyd.edu.au

NSW cphn
NSW Centre for Public Health Nutrition
www.cphn.biochem.usyd.edu.au

Funded by the NSW Health Department and supported by the University of Sydney

From the Editor...

Welcome to the first edition of the Prevention Research Centres Newsletter! This newsletter incorporates the work of the Centre for Overweight and Obesity (COO), Centre for Physical Activity and Health (CPAH) and Centre for Public Health Nutrition (CPHN), known collectively as the Prevention Research Centres (PRC). The centres are based at the University of Sydney and are supported by funding from the NSW Health Department.

Our mission is to develop evidence on effective strategies to promote nutrition and physical activity and prevent overweight and obesity that are relevant to policymakers and community members in NSW. This newsletter seeks to highlight some of our public health research in the interests of using research to inform public debate and influence healthy policy. It will be distributed biannually and will contain the latest research findings and news and events from the PRC.

In this first edition we illustrate a broad range of research projects, including walking to school, soft drink consumption, breastfeeding policy and, of course, SPANS.

Thank you to Josephine Chau, Alex Wilde and Adeline Yaw for their work as part of the editorial and production team. ★

SPANS Bytes

SPANS 2004 was a representative population survey of 5,400 NSW school students in Years K, 2, 4, 6, 8 and 10, conducted in the first half of 2004. The research team collected data from 45 primary and 45 secondary schools, across government, non-government and independent sectors, and from urban and rural areas.

The researchers measured height, weight and waist girth of all students. They assessed fundamental movement skill proficiency among Year 2 and older students and cardio-respiratory fitness among Year 4 and older students. Year 6, 8 and 10 students completed comprehensive self-report questionnaires, providing information on: participation in organised and non-organised physical activity; modes of travel to and from school; the time usually spent in sedentary behaviours; and food habits and eating behaviours. The reports include information on trends over the last 20 years in children's weight status and physical activity participation. The SPANS 2004 research team has made thirteen recommendations for addressing childhood overweight and obesity and ensuring that NSW has appropriate policies, programs and infrastructure to facilitate action.

SPANS shows declines in use of active transport to school

Only about a third of Year 6 students walked to school everyday, and 20% used public transport, while around 70% of secondary school students travelled to school by walking or using public transport. But walkers only walked for about 10-15 minutes and those using public transport only spent about five minutes walking overall.

Overall, active transport to and from school has reduced markedly since 1985. While there are many potential explanations for these changes and active transport only makes up a very small proportion of total daily energy expenditure, it does represent an opportunity for young people to incorporate physical activity into everyday routines.

Walking to school: is 1.5km too far?

By Dafna Merom

According to an international study, children living 1.5km from school are twice as likely to not walk to school compared to children who live closer. The cross-sectional study found almost 70% of children walked to school five or more times a week if they lived 0.75km from school, but this number decreased by a third if they lived 1.5km away.

Among children living 2.5km from school, only 10% walked to school one to four times a week, and the number of children walking decreased in a linear fashion as distance from school increased.

The American and Australian researchers found child's age, parental concern about road safety, and school affiliation significantly influenced the frequency with which a child would walk to school. Whether a child walked also depended on their level of independence after accounting for age and whether parents believed in the health benefits of walking as a form of travel.

Children were twice as likely to regularly walk to school if their father was responsible for taking them rather than their mother, the study said. The likelihood of a child walking to school also doubled if the parent did not work, compared to children whose parent always drove themselves to work by car.

The results suggest that making the environment safer or more supportive of walking may not be sufficient measures for promoting walking to school. The researchers advised that sustainable and population-wide behaviour change will require multi-level strategies, which should harness the influence of schools, workplaces and the media. Walking to school should be viewed as a planned strategy negotiated with parents according to family constraints and resource.

The researchers recommended that interventions should include families, especially the involvement of fathers in the responsibility of their child's journey to school. Job-related policies in favour of working parents, such as flexible working hours, would assist parents to forego the car as a mode of travel to work. Schools could educate children, parents and other community members about transport options available and the health benefits of walking. Together with influential media support, such strategies would encourage the public to see walking to school as a common activity in the community, ensuring a favourable climate that would help sustain positive change.

Reference: Merom D, Tudor-Locke C, Bauman A, Rissel C. Active commuting to school among NSW primary school children: implications for public health. *Health & Place* 2006; 12: 678-687.

Do soft drinks contribute to weight gain?

By Anna Rangan

With mandatory policy now banning the sale of soft drinks in government schools in NSW, it is timely to disseminate the evidence on the links between soft drinks and weight gain.

The majority of recent studies show soft drink consumption is strongly associated with obesity in children. In particular, five longitudinal studies involving 25,000 children and adolescents found those who drank a large amount of sugar-sweetened drinks were at increased risk of weight gain and obesity[1].

A landmark study in 2001 involving about 550 children average age of 12 years, found that after 19 months BMI increased by 0.18 for each sweet drink consumed daily at baseline. Associate Professor David Ludwig, Director of the Obesity Program at the Children's Hospital Boston and colleagues also showed that the risk of obesity increased by 60% for each additional drink consumed per day during this period[2].

Two intervention studies in children found that reducing soft drink consumption over 6 to 12 months, resulted in a reduction in weight gain or a reduction in obesity compared to the control group[3,4].

Most studies indicated that consuming a large number of soft drinks led to a higher overall energy intake, which could result in weight gain if not combined with an adequate increase in physical exercise. This may be because carbohydrates consumed in a liquid form, for example via soft drinks, may be less satiating and less well compensated for at the next meal, than those consumed in a solid form, like jelly beans. Children consuming a lot of soft drinks may also have other poor dietary or lifestyle habits, such as eating less fruit and vegetables or exercising less, that could contribute to their risk of obesity.

In Australia, soft drinks are consumed in large quantities, especially among teenagers. The 1995 National Nutrition Survey showed that adolescents between 16 and 18 years of age gained 5.5% of their total energy intake from soft drinks. This figure increased to 10.8% after adjusting for non-drinkers[5]. The high consumption of soft drinks among children and teenagers and evidence of its relationship with obesity could present a potential opportunity to reduce childhood obesity through intervention programs.

References

[1] Dietz WH. Sugar-sweetened beverages, milk intake, and obesity in children and adolescents. J Pediatr. 2006 Feb;148(2):152-4.

[2] Ludwig DS, Peterson KE, Gortmaker SL. Relation between consumption of sugar-sweetened drinks and childhood obesity: a prospective, observational analysis. Lancet 2001;357:505-8.

[3] James J, Thomas P, Cavan D, et al. Preventing childhood obesity by reducing consumption of carbonated drinks: cluster randomised controlled trial. BMJ 2004;328:1237.

[4] Ebbeling CB, Feldman HA, Osganian SK, Chomitz VR. Ellenbogen SJ, Ludwig DS. Effects of decreasing sugar-sweetened beverage consumption on body weight in adolescents: a randomized, controlled pilot study. Pediatrics 2006; 117:673–680.

[5] Gill TP, Rangan AM, Webb KL. The weight of evidence suggests that soft drinks are a major issue in childhood and adolescent obesity. There is much to be gained by reducing children's intake of soft drinks and little - except excess weight - to be lost. MJA. 2006;184(6):263-4.

How to address the issue of excessive soft drink consumption

By Tim Gill

There is an emerging consensus on the role of excessive consumption of sugar-sweetened drinks in the genesis of childhood overweight and obesity in Australia and elsewhere (see previous article). Although the efficacy of restricting the intake of sweetened beverages has been less well examined there is some evidence that such a strategy would have a strong effect on reducing inappropriate weight gain in children. This raises the question as to how best to achieve a restriction in the intake of such beverages in children and what might be the implications of such strategies.

In a recent article submitted for publication, the Centre for Public Health Nutrition argues that there are a range of behavioural and environmental strategies that have potential to help achieve this objective and that it is likely that a combination of these will be required to achieve meaningful reductions in sweetened drink intake. The article argues that there is a sound rationale for focussing actions on soft drink consumption as this is a clearly defined product, that is widely available, heavily marketed and makes the largest contribution to sweetened beverage intake among older children and adolescents in Australia. In addition, soft drinks do not make a positive contribution to the nutritional intake of children and their consumption has been linked to other potential health problems such as dental erosion and tooth decay. However, this does not preclude action on other sugar-sweetened drinks such as sports drinks, “energy” drinks, cordials and fruit drinks.

There are three obvious behavioural strategies to achieve a reduction in soft drink consumption. These are: 1) Educate for a reduction in overall soft drink consumption; 2) replace sweetened soft drink consumption with artificially sweetened soft drink; and 3) replace sweetened soft drinks with other low energy beverages such as water. Although option 2 has been used in some intervention trials and may be the simplest strategy to implement, it fails to address the negative consequences of dental erosion and caffeine intake associated with artificially sweetened beverages. It may also present a confused message to children about the nutritional role of soft drinks in general. Both options 1 and 3 present a clearer message to children on appropriate beverage consumption and some limited work has shown they are possible to achieve and may result in positive weight outcomes. However, they will take longer to achieve and may require more intensive input.

Some of the limitations of the behavioural strategies could be addressed if structural and policy changes that deal with the availability and appeal of soft drinks and alternative beverages to children are implemented at the same time. A variety of reports have identified some key structural issues that could influence soft drink consumption. These include: access; price; portion size; and marketing. Apart from restricting access to soft drinks at school, there has been very little evaluation of the potential of these environmental strategies to assist with restricting overall soft drink intake. There is very strong support from many sectors of society for further restrictions on the advertising of high energy, low nutrition products, such as soft drinks, to children but these representations have been rejected by the Federal Government, thus far.Likewise, suggested price interventions have been dismissed as useless and unworkable by industry and Government and some social commentators are also concerned that increasing the cost of soft drinks may have unintended negative consequences for low income groups. Most environmental options have been rejected without any attempt to rationally explore the potential positive and negative outcome that may be achieved. Given the current extent of childhood weight problems in Australia and the rapid rate at which this is increasing, such a response would appear to be a very imprudent approach to defining policy on this issue.

SPANS results show soft drink consumption is serious daily concern

Almost 60% of boys and more than 40% of girls drink more than 250ml per day of soft drink. As much as 7-12% of boys and a smaller proportion of girls drink in excess of one litre per day. High consumption of these non-nutritive, high-energy products is a grave cause for concern, especially as adolescents drink far more of them than more nutritious beverages such as milk and fruit juice.

Breast feeding policy to boost infant health

By Ruth Worgan

While there is strong evidence that breastfeeding is associated with optimal infant health, immunity, physical growth and cognitive development most mothers in NSW[1] do not follow NHMRC infant feeding recommendations, that is - exclusive breastfeeding for six months and continued breastfeeding to at least twelve months. Fortunately help is on its way! NSW Health has recently launched its first comprehensive breastfeeding policy *Breastfeeding in NSW: Promotion, protection and support*[2], which aims to promote the delivery of essential information and intervention programs to promote and support mothers to breastfeed.

There is a substantial evidence base[3] that health service policies and practices and the way health services are organised have a significant influence on breastfeeding rates, which suggests implementation of *Breastfeeding in NSW: Promotion, protection and support* has excellent positive potential.

Strategic actions outlined in the Policy include organisational support for an enhanced, coordinated NSW Health effort; workforce development and provision of breastfeeding friendly workplaces; provision of evidence-based health services; incorporation of breastfeeding education and support into routine antenatal care, hospital maternity care, child and family health services and paediatric services; collaboration with organisations outside the NSW health system and monitoring and reporting of breastfeeding rates.

Breastfeeding is the most cost-effective, sustainable means to feed infants, providing substantial cost savings to families and the health system. *Breastfeeding in NSW: Promotion, protection and support* aims to enhance not only the knowledge, attitude and skills of the health workforce to promote, protect and support breastfeeding, but facilitate breastfeeding education and skilled support for all parents, especially parents experiencing difficulties, to encourage and support the mother to continue to breastfeed.

NSW Health is conducting planning days in each Area Health Service over the next couple of months to assist local services with policy implementation. Evaluation of the policy's efficacy will take place through continuous monitoring and reporting of NSW breastfeeding rates by the NSW Department of Health, and reporting of policy implementation outcomes by the Area Health Services.

[1] Report on Breastfeeding in NSW (NSW Centre for Public Health Nutrition and NSW Health, 2004, Revised 2005)

[2] Breastfeeding in NSW: Promotion, protection and support (NSW Health 2006)

[3] Overview of recent reviews of interventions to promote and support breastfeeding (NSW Centre for Public Health Nutrition and NSW Health, 2004)

International physical activity and public health course a success

By Stephanie Schoeppe

The Centre for Physical Activity and Health (CPAH) and the Ministry of Health Malaysia conducted an international course to foster expertise and skill development around physical activity and public health in the Asia Pacific Region.

The course aimed to support health promotion workers and health professionals from governmental and non-governmental organizations to develop population-based approaches for the promotion of physical activity within the context of the implementation of the WHO Global Strategy on Diet, Physical Activity and Health in the Asia Pacific Region.

Course participants showed a strong commitment and all agreed that the Ministry of Health Malaysia had done an excellent job of organising the workshop locally. Positive feedback from evaluations confirmed that the course had been a success.

The 5th International Course on Physical Activity and Public Health was held 9-11 May 2006 in Kuala Lumpur. The course was supported by the U.S. Centers for Disease Control and Prevention (CDC), the International Union for Health Promotion and Education (IUHPE) and the World Health Organization (WHO).

NHMRC Equipment Grant

By Hidde van der Ploeg

The Centre for Physical Activity and Health (CPAH),in collaboration with a multidisciplinary team of experts from the University of Sydney, has successfully bid for a National Health and Medical Research Council (NHMRC) Equipment Grant. The grant application was a joint effort of the Prevention Research Centres, the Institute of Transport & Logistics Studies, the Children's Hospital at Westmead and the School of Exercise and Sport Science.

The Equipment Grant will be used to purchase three different types of activity monitors, Actigraph accelerometers, Yamax pedometers and Neve Steplogger GPS/accelerometer units. Furthermore, nephelometers will be purchased for measuring air pollution. The new equipment will facilitate research projects that depend on the accurate measurement of physical activity. In the short term, CPAH will use the new equipment in two different studies.

The accelerometers will be used in a study testing the reliability and validity of time use diaries, where people complete daily records on the range of activities that they did throughout the day. The steploggers and nephelometers will be used in a study on assessing levels of air pollution exposure in people who undertake active and passive transport.

'Bledisloe Cup' of Physical Activity

By Adrian Bauman

New Zealand has won the title of 'most active nation' according to international physical activity research. The International Prevalence Study (IPS) found Kiwis pipped Aussies to the post, by demonstrating just over two-thirds of New Zealanders to be sufficiently active compared to less than 60% of Australians.

Based on a random sample telephone-based survey, the population-based study found differences between the two countries could be attributed to the prevalence of physical activity among men (NZ 74.4% vs AUS 65.1%) but not women. Men aged 50 to 65 years contributed the most, with New Zealand men of this age group accounting for just over two-thirds of the prevalence of physical activity in New Zealand while their Australian counterparts accounted for about half the physical activity in Australia (63.2% vs 50.3%).

The researchers proposed that the New Zealanders ran away with the 'Bledisloe Cup' of physical activity due to a positive view of the New Zealand physical environment, the active Kiwi way of life and sustained national government physical activity initiatives, including the Push Play campaign and the Green Prescription.

Reference: McLean G, Smith B, Bauman A, Tobias M, Carr H. The public health 'Bledisloe Cup': physical activity prevalence differences between New Zealand and Australia. Aust N Z J Public Health. 2005, 29(5):490-1.

Weight of Time Report Launched

On Sunday June 12th 2006, the NSW Minister for Health launched the *Weight of Time* reports. Two companion short reports, one each for men and women, present new findings on the effects of three time factors on weight patterns.

The findings show that age, the time at which the surveys were conducted and the generation men and women are born into all influence weight status and patterns of weight change.

The report confirms that young people are gaining weight faster than previous generations. Modern life and social changes which promote weight gain have hit Generation X-ers at a younger age. This is especially worrying, as many of them are parents of young children.

Getting research into practice in Early Childhood Services

COO presented the findings from its qualitative research with the early childhood sector, which forms part of the Weight of Opinion Study to a forum of peak agencies on May 17th 2006. At the Forum, members of peak early childhood organisations, health groups and government departments discussed opportunities to collaborate and ideas for developing new initiatives, in the light of the findings. A working group has been formed to develop a strategy for moving the ideas on resource development and dissemination, training programs and policy issues into practice. The report in now available on the COO website.

Creating Healthy Environments Report

COO, CPAH and CPHN worked together to produce a summary of evidence on how the physical environment influences physical activity, nutrition and obesity. This report includes a Technical Report based on a review of the scientific evidence, as well as an Overview that provides a synthesis of the key findings and discussion of the implications for policy makers and practitioners.

Copies are still available - email COO at **cook25@health.usyd.edu.au**

New work plan for NSW CPAH

The NSW Centre for Physical Activity and Health (NSW CPAH) has developed a new work plan for 2006-7, following extensive consultations in March and April with key stakeholders in the promotion of physical activity in NSW. The new work plan aims to fulfill the needs of stakeholders and to reflect NSW CPAH's commitment to supporting innovation and quality in the wider physical activity workforce. NSW CPAH's objectives include 1) to improve access to physical activity information; 2) to support evidence based planning; 3) to support workforce development; 4) to support applied research and evaluation; and 5) to support communication and information dissemination. The plan has been approved by the NSW Department of Health and work on some of the areas has commenced. For more information about NSW CPAH's current priorities and directions, please visit the CPAH website, **www.cpah.health.usyd.edu.au**