



INCREASING PHYSICAL ACTIVITY PARTICIPATION IN NSW

GUEST EDITORIAL

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Physical activity has recently become a prominent topic in NSW, boosted by the pre-Olympic fervour, and the recently published US Surgeon General's Report on physical activity and health (1996)¹. Physical activity has always been a part of human lifestyle, but in recent decades, sedentariness has become the norm for the adult population. Industrial urban society, television, the Internet and motor vehicles each play a central role in diversifying and extending inactivity in the population.

Over the past few decades clear scientific evidence has emerged, defining health benefits for moderate and vigorous regular physical activity for all adults. Research has been mostly from cohort (longitudinal) population studies, similar to the study designs used to describe the links between smoking and disease. The evidence has been slow to disseminate into the health community, in the absence of institutional advocates of physical activity promotion. Nonetheless, the evidence has been compelling, and the Surgeon General's report has refocused the agenda over the past 12 months.

In NSW substantial and strategic efforts have commenced to define the problem, develop solutions and monitor the outcomes of physical activity-promoting efforts towards the year 2000. This issue and the next two issues of the *NSW Public Health Bulletin* focus on physical activity in the NSW population, and describe approaches to activate the sedentary.

An article in this issue describes Statewide and national initiatives and partnerships for physical activity. NSW is playing a leading role in catalysing interest in broad, intersectoral approaches to the promotion of physical activity. In the next issue of the *Bulletin* generic approaches and programs under development at Area Health Service level are described. Many Areas are developing local physical activity promotion plans.

The next issue of the *Bulletin* will also describe the role of the media in promoting physical activity (through community-wide intervention programs), the use of environmental change approaches to increasing physical activity, and the use of intersectoral planning to develop better physical activity programs at the local level. To establish a benchmark for physical activity and fitness for young people in NSW, a Statewide survey of school students from Grade 3 to Year 10 is currently underway. This will be described in the third issue of this series.

Continued on page 12 ►

Contents

Articles

11 *Increasing physical activity participation in NSW - Guest Editorial*

13 *Towards best practice in the promotion of physical activity*

17 *Infectious Diseases*

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Increasing physical activity

► Continued from page 11

EVIDENCE FOR HEALTH BENEFITS

The health benefits of physical activity are legion. The best epidemiological evidence is for the prevention of cardiovascular disease, and the reduction of all-causes mortality among those who are physically active, compared with those who are sedentary. Studies have repeatedly shown that those who are sedentary have 1.5- to twofold increase in the risk of incident or fatal cardiovascular events, compared with those who are at least moderately physically active^{2,3}. It is well established that physical inactivity is at least as important a population risk factor for coronary heart disease as hypertension or high cholesterol levels⁴.

Consistently across studies, the maximum cardiovascular disease benefit occurred in moving from sedentary or low fitness groups in the population to moderate activity or moderate fitness levels. Evidence of a dose-response relationship exists, with more sustained activity conferring greater health benefit. There is consistency across research studies, and the effects of physical activity or fitness persist after statistical adjustment for the effects of other risk factors. If every NSW adult became physically active, more than 3,000 deaths might be prevented each year. However, if the more modest targets of 3-5 per cent increases in prevalence of physical activity participation were achieved, about 300 deaths a year might be prevented⁵.

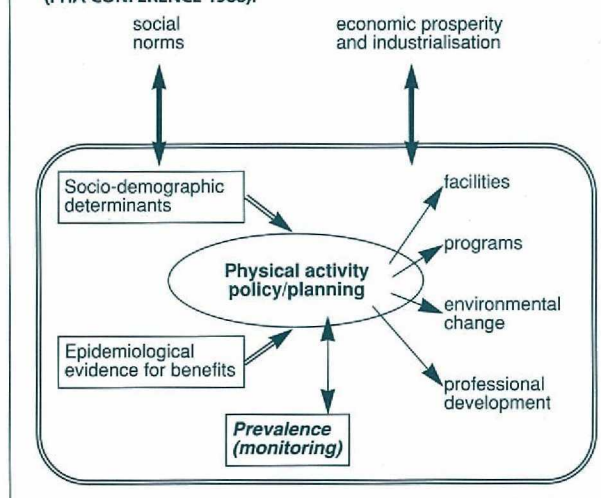
Other areas where evidence is strong is in the prevention of colon cancer, reducing the incidence and complications from diabetes, and in having a positive effect on blood pressure, relative body weight, and HDL cholesterol levels among those who are active¹. Other benefits probably include a benefit in stroke prevention, a possible role in the prevention of other cancers, osteoporosis prevention, and in fostering social and mental health. The promotion of physical activity may also be an adjunctive therapy for many with clinical depression or anxiety⁶. In line with the recent National Health and Medical Research Council (NHMRC) report on overweight and obesity in Australia⁶, physical activity has a role in weight maintenance, although more sustained and vigorous activity may be needed to achieve long-term weight loss among the overweight and obese.

Recent evidence points to the population need for all adults to undertake regular moderate physical activity, which can be accumulated during the day^{7,4,8}. This differs from earlier recommendations that focused upon vigorous activity, at least three times a week, for 20-30 minutes a session. The evidence for more moderate activity is now compelling¹ and strategies to encourage this across the population are now needed.

Thus the public health rationale for promoting physical activity is now impressive. Given the high prevalence of inactivity or low levels of activity, the population-attributable risk for physical inactivity is very high; it appears to be at least as important in CHD prevention as smoking or high cholesterol, and has a range of other health and social benefits beyond preventing heart disease. It appears that becoming active at any age confers a benefit,

FIGURE 1

DEVELOPING PHYSICAL ACTIVITY PROGRAMS AND POLICIES: A CONCEPTUAL MODEL (PHA CONFERENCE 1988).



even when activity is started in older middle-aged adults^{9,10}, with some risk reduction apparent within two years⁹.

CURRENT STATUS OF PHYSICAL ACTIVITY IN NSW

Only half of NSW adults are expending enough energy on leisure time physical activity for health benefit. Population groups at risk of being less active include women (especially those with children), non-English speaking residents, middle-aged adults (40-60 years) and those aged over 70, and those at educational disadvantage⁵. An equity perspective suggests these groups may have particular barriers to participation, and require innovative physical activity-promoting strategies.

Finally, youth health survey data shows that physical activity participation declines through adolescence, especially for girls¹¹. Recommendations for adolescents include regular and more vigorous activity for all adolescents¹², with the additional objective of developing a permanent active lifestyle.

TOWARDS POLICIES AND PROGRAMS

A summary of the process of developing and influencing physical activity policy is shown in Figure 1. This figure was first aired a decade ago¹³, when it was described as an 'incomprehensible force field', although it now seems almost simple. In essence, policy and program development is influenced by changing and clearer epidemiological evidence, better understanding of the determinants of activity (with knowledge of who is not sufficiently active in the population, using an equity approach to data), and by the broader social, economic and cultural conditions of a country. The public health relevance, even of decade-old models, remains important in the planning cycle.

Best practice in physical activity promotion may include theoretically driven, and individual change-focused

Continued on page 17 ►

Increasing physical activity

► Continued from page 12

counselling, based on behaviour change principles⁶. Health professionals, including general practitioners, need to provide brief advice about physical activity for all consultations. Research and demonstration projects in NSW are assessing the effectiveness of these approaches.

A specific challenge is that programs encouraging physical activity will inevitably involve working beyond the health sector. Physical activity is central to the work of Departments of Sport and Recreation, and has an important place in the work of schools, urban planning, local government and many non-governmental agencies and the private sector. Working across departments and agencies is more likely to result in the environmental changes required to support physical activity in the community. Incidental physical activity, such as walking children to school, is encouraged by the existence of a safe walking route with minimal traffic.

The NSW strategic planning process to achieve a 'whole of Government' framework is embodied in the work of the NSW Premier's Task Force on Physical Activity. The next few years will see media campaigns recommending brisk walking every day, but these need to be reinforced by environmental projects to construct safe, well-lit walkways and pavements and to link green spaces within urban communities. The health sector will be required to extend its thinking about the limits to public health programs to achieve these goals.

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TRENDS

With summer ending, reports of **arbovirus** infections have risen sharply (Figure 5), particularly **Ross River virus** infections in the Greater Murray Area (in the south west of NSW) (Table 1). **Hepatitis A** cases doubled in January 1997 throughout the State, due largely to an outbreak traced to the consumption of contaminated oysters from Wallis Lake (see *NSW Public Health Bulletin* issue for January-February 1997). Reports of **pertussis** are still pouring in, continuing an upward trend that began in mid 1996. Despite an effective vaccine, cases of **Q fever** continue to occur with little sign of abatement from (what should be) historical levels (Figure 5).

OUTBREAK OF HEPATITIS A WITHIN A FAMILY

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A routine investigation by South Eastern Sydney (SES) Public Health Unit (PHU) of a reported hepatitis A case in February 1996 uncovered a cluster of cases in an extended family. All cases had attended a family function and had close contact with an infectious case, yet none received normal human immunoglobulin (NIGH). The investigation was hampered by incomplete and delayed notifications.

Hepatitis A is an infectious disease with symptoms including fever, malaise, anorexia, nausea and abdominal pain, followed by jaundice. Infection can be mild or asymptomatic, especially in children, and illness is almost always followed by full recovery. The incubation period averages 28-30 days¹. Hepatitis A is transmitted by the faecal-oral route, and is most infectious during the two weeks before, to one week after, onset of jaundice. Prevention involves early counselling of the patient and advice on good hand washing, food hygiene, and mode of transmission. NIGH given to close contacts within two weeks of exposure may prevent or lessen severity of the symptoms¹. The NSW Public Health Act requires laboratories to notify cases on serological confirmation and medical practitioners to notify cases on provisional diagnosis of acute viral hepatitis.

Case reports

On February 7, 1996 a laboratory notified SES PHU of a 36-year-old man with hepatitis A (Case A). The blood sample had been collected on January 25. Case A reported that he had become ill on January 20 with nausea, fever and vomiting, and developed jaundice on January 30. His doctor arranged for his close contacts to receive NIGH.

One week later, a neighbouring PHU reported having been contacted by a second case (Case B) who had been diagnosed with hepatitis A by her doctor. Case B stated that other members of her family had also developed hepatitis A, including her brother, who was Case A.

On February 13, 1996 we were notified by a neighbouring PHU of a case of hepatitis A in a female (Case C) with the same family name as Case A. The date of the specimen collection was January 29. The names of the patient and the referring doctor were the only information available.

Continued on page 18 ►