

Walk It **Active Local Parks**

Promoting walking and physical activity in local parks

Why physical activity?

Regular physical activity has many health benefits including reducing the risk of heart disease, diabetes, colon cancer, high blood pressure and obesity. Physical activity also promotes psychological well-being, builds and maintains bone density and reduces the risk of dying prematurely.

Research shows that a vigorous work-out is not required to gain health benefits. Moderate intensity activity, such as walking, can be beneficial for health, provided that it is done frequently enough. The latest recommendation is to accumulate 30 minutes or more of moderate physical activity on most, preferably all days of the week.

Walking is an ideal form of physical activity. It is low-cost, requires no special clothing or equipment, and can be done at any chosen time, in a convenient location either alone or with others.

Health promotion interventions to increase physical activity generally focus on:

- ▶ increasing motivation to exercise
- ▶ increasing the facilities available for exercise
- ▶ improving access to exercise facilities
- ▶ promoting moderate activity.

The most successful interventions use multiple strategies in multiple settings directed at a specific target.

Why parks?

Theoretically, parks are an ideal place in which to be physically active. There is no cost involved in using a park, they can be accessed at any time and they are generally easily accessible for most members of the community. Just as our surroundings can have an important effect on our exercise habits, either facilitating or discouraging activity, the size, facilities and aesthetic features of a park may influence its use. Modifying parks to make them more conducive to physical activity is a potential means of encouraging activity.

The project

Walk It: Active Local Parks was initiated as a physical activity demonstration project funded by the NSW Health Department and Parramatta City Council and managed by the Western Sydney Area Health Promotion Unit. The aim of the project was to increase participation in moderate physical activity in adults aged 25–65 years.

The two main objectives of the project were to:

1. evaluate the effect of the study interventions on physical activity in adults
2. determine the validity of an infra-red counting device to monitor park use.

Two regions (an intervention and a control group) within the Parramatta local government area in NSW were selected for the study. Three parks in the intervention region were selected to receive the park modifications and two parks from the control region acted as control parks.

Who was involved?

The Walk It: Active Local Parks project was the result of a collaboration between the Western Sydney Area Health Service (WSAHS) and Parramatta City Council. A management committee was convened to oversee the design and implementation of the project. Membership consisted of representatives from the Area Health Service, Parramatta City Council, NSW Health Department, the Department of Sport and Recreation, The University of Western Australia, and The University of Western Sydney, Nepean.

The interventions

Figure 1 outlines the timing of the interventions.

Promotion campaign

The promotion campaign for the project consisted of four components and was designed to raise awareness about the benefits of participating in regular physical activity.

1. Feature articles in community newspapers

The project was successful in gaining free media coverage through feature articles in two local community newspapers. Nine feature articles, including six black and white photographs, were published covering 468 column centimetres. The articles covered:

- ▶ information about the Walk It: Active Local Parks collaborative project between WSAHS and Parramatta City Council
- ▶ the distribution of the project's walking map
- ▶ walking the dog as a form of exercise
- ▶ walking promotion
- ▶ hints on being active in local parks and neighbourhoods.

Walk It Active Local Parks

Activity	Date																	
	1997		1998												1999			
	Nov	Dec	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	
Telephone survey	✓	✓																
Daily infra-red counter reading in parks	✓	✓																
Direct observation in parks				✓	✓													
Project promotion activities									✓	✓	✓	✓	✓	✓				
Park modifications							✓	✓	✓	✓	✓	✓						
Walking groups											✓	✓	✓	✓		✓	✓	
Telephone survey													✓	✓				
Daily infra-red counter reading in parks													✓	✓				
Direct observation in parks																✓	✓	

Figure 1: Timeline of intervention implementation and data collection

2. Advertisement in community newspapers

A paid advertisement appeared in two community newspapers (one of the two papers that published the feature articles and a third community paper). The advertisement was a quarter-page black and white version of the front of the walking map leaflet (see point 3).

3. Walking maps

The walking maps were a double-sided, colour, glossy leaflet. One side emphasised the importance of being active, provided tips for being active, and had a map on which the intervention parks were highlighted (figure 2). The reverse side of the leaflet provided more detailed pictures and information about the walking trails (figure 3).

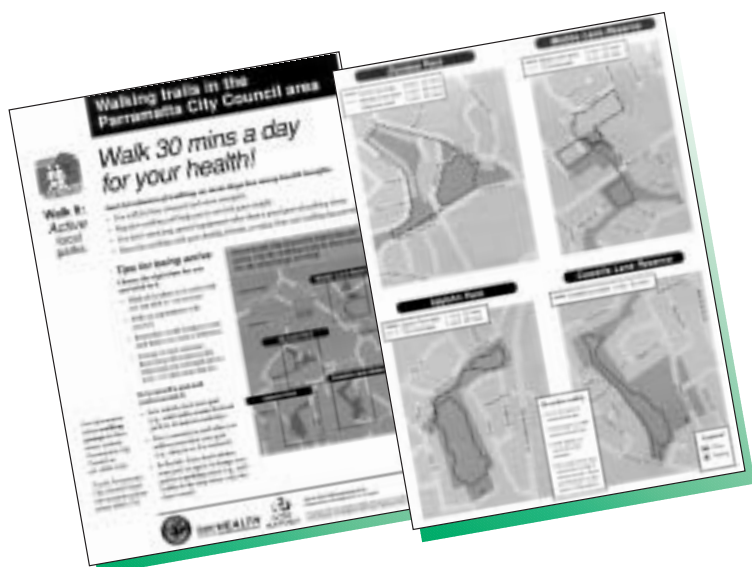


Figure 2: Front view of walking map leaflet

4. Project launch

An official project launch, attended by the Lord Mayor of Parramatta City Council and a local sporting identity, was held at a club adjacent to one of the intervention parks to generate further interest and publicity.

Park modifications

A team consisting of WSAHS and Parramatta City Council staff reviewed the three intervention parks (Table 1) and developed a list of recommended modifications. The modifications included changes generic to all parks, and specific changes based on each park's existing facilities and features. The generic modifications included:

- ▶ signs 'advertising' the walking trail/s stating the length of each walk and the approximate time that it would take to complete
- ▶ coloured arrows (signs) positioned around the park to indicate the relevant walking trail.

The specific modifications included:

- ▶ pruning and bush regeneration
- ▶ gate and park sign repaired
- ▶ garbage bin provided
- ▶ old garbage bins replaced
- ▶ bitumen path repaired
- ▶ pram/wheelchair access from car park to path created
- ▶ new children's playground
- ▶ bridge erected over open storm-water drain
- ▶ amenities block and club building painted.

Figure 3: Back view of walking map leaflet

Park characteristics	Control ward		Intervention ward		
	Park 1	Park 2	Park 3	Park 4	Park 5
Classification	Park	Sports ground	Park	Urban bushland	Sports ground
Size (hectares)	12.95	9.85	12.34	4.15	6.46
Park features*					
Walking paths (bitumen or concrete)	Some sides of perimeter	Some sides of perimeter and radial	From entrance to playground only	None	All sides of perimeter. Provides a shortcut to rugby club and shop
Lighting	Basketball courts only	Sports oval only	None	None	Sports oval only
Playground	✓	✓	✓	✓	✓
Building/clubroom	✓	✓			✓
Basketball courts	✓				✓
Sporting oval		✓			✓
Park surroundings*					
Suburban housing only			✓		✓
Suburban housing and bushland	✓	✓			
Suburban housing and industrial				✓	

* The information for each park is based on the park audits conducted by members of the project team

Table 1: Characteristics of study parks at baseline

Walking groups

The walking groups were promoted by:

- ▶ a letter box drop of flyers
- ▶ feature articles in the local newspapers
- ▶ sending information to community groups, health professionals, schools, and local businesses in the intervention area
- ▶ posters and flyers in parks, shops, and other places in the local area.

Six walking groups were established, with at least one group meeting at each of the intervention parks.

The evaluation

The effectiveness of the project interventions was measured by:

- ▶ physical activity participation rates
- ▶ the proportion of adequately active people
- ▶ use of local parks.

These details were measured before the implementation of the interventions and at follow-up, 12 months later (Figure 1) by:

- ▶ a telephone survey of a sample of residents aged 25–65 years from the control and intervention regions
- ▶ direct observation of the five study parks
- ▶ an infra-red counter placed across a thoroughfare in each of the parks.

To determine the validity of the infra-red counter, direct observation data were compared to data simultaneously collected by the infra-red counter.

Findings of the study

Awareness of promotional activities

- ▶ awareness of the walking promotion and cued recall of the project slogan increased from baseline to follow-up in both the intervention and control groups, however this was significantly better in the intervention than the control group
- ▶ intervention group respondents were more likely than control group respondents to have seen or heard information about local parks (29% compared to 18%)
- ▶ less than one-third of respondents were aware of the walking group promotion
- ▶ 24% of intervention group respondents recalled receiving the walking maps.

Participation in physical activity

Walking was a common activity, with 82% of respondents reporting that they had walked in the two weeks prior to the baseline survey.

The follow-up telephone survey revealed:

- ▶ 89% of intervention group respondents reported walking in the previous two weeks, compared to 81% of control group respondents

- ▶ no significant differences between groups in vigorous exercise (41% for control and 42% for intervention group respondents) or in light to moderate physical activity (50% for control and 49% for intervention group respondents).

Adequate activity

Respondents were classified as being adequately active if they engaged in at least 150 minutes and five sessions of moderate activity or three sessions of 20 minutes of vigorous activity per week. The main findings related to adequate activity were:

- ▶ less than half of the respondents were adequately active at baseline (48%) and at follow-up (46%)
- ▶ no significant differences between groups in the proportion of respondents that reported participating in activity at an adequate level at follow-up (43% and 49% for control and intervention group, respectively)
- ▶ women were 30% less likely than men to be adequately active.

Use of local parks

Both telephone survey and direct observation data showed no change in park use between baseline and follow-up.

The validity of infra-red counters

The validity of the infra-red counter varied, depending on what was measured and the park in which measures were taken.

- ▶ agreement between the infra-red counter and the observer in measuring overall park use ranged from 31% to 100%
- ▶ the infra-red counter overestimated the number of individuals (counting each person only once) observed to pass through the counter
- ▶ the infra-red counter recorded 90% to 116% of the observed path use (each pass was considered independently, even if the person had previously passed through the counter)
- ▶ excluding people the observer thought would not be registered by the infra-red counter (eg people too short to register), agreement was extremely high at 98%.

Limitations

Whilst the project was successful in attracting good publicity through the local newspapers, their distribution areas made it impossible to keep the control group isolated. Consequently both groups were exposed to a significant

proportion of this aspect of the intervention, thereby eliminating our control group. Cross contamination of the park modifications also occurred with one of the control parks receiving a significant upgrade of its playground during the course of the project. In addition, only one of the intervention parks received significant modifications, with the other two parks receiving minimal changes, most of which could be considered as general maintenance.

The walking groups were in general poorly attended. Delays between advertising and starting the groups may be partly responsible for this. However, initial interest in the groups, as indicated by phone inquiries, was not strong and may suggest that the promotion of the walking groups was not effective.

The response to the telephone survey was low (20%) and respondents were not representative of residents in their region in terms of education, household income, and usual language spoken at home, potentially biasing the results. It is not clear why the response rate was so low, but could possibly be attributed, at least in part, to the time of year (late November to early December) and the length of the survey (approximately 20 minutes).

Conclusions and recommendations

Due to problems outlined above, it is inappropriate to comment on the effectiveness of our study interventions in increasing participation in physical activity.

Recommendations for overcoming some of these problems include:

- ▶ increase the distance between the study areas to reduce possible contamination of the interventions
- ▶ maximise the impact of the park modifications by focusing on one intervention park, rather than three
- ▶ select intervention parks on the basis of their potential for modifications that will encourage park use.

The infra-red counter:

- ▶ is not recommended for measuring the use of large areas with multiple entry and exit points
- ▶ may be viable for measuring the number of times that a path is used
- ▶ should be validated at each site that it is to be used.

Detailed guidelines for the use of infra-red counters in open spaces have been developed and are available separately.

A copy of the full report on this project can be downloaded from the NSW Health Website on www.health.nsw.gov.au