



Overview

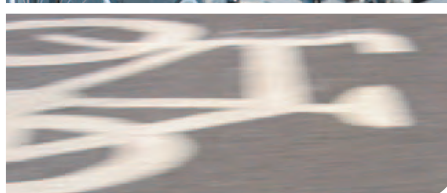
Physical inactivity is a major contributor to poor health in Australia. Approximately half the Australian population is insufficiently active, which significantly increases their risk of cardiovascular disease, Type 2 Diabetes and obesity. A lack of physical activity also increases the risk of breast and bowel cancer, depression and anxiety.

The rate of obesity in Australia is among the highest in the OECD. There is now convincing, yet under-recognised evidence that boosting levels of physical activity through cycling is an effective method of improving health and fostering social connectedness.

The potential of cycling to increase physical activity levels in adults is significant. Cycling is already the fourth most popular physical activity for adults and can be undertaken by a wide variety of people of different ages and fitness levels; it is affordable and can be integrated into people's daily lives and used as a form of transport.

This summary is based on a full research report commissioned by the Commonwealth Department of Health and Ageing and has been undertaken by the Cycling Promotion Fund.

The report has been developed to assist practitioners, policy makers and planners to increase participation in bicycle riding by Australian adults. Firstly, the report outlines current barriers and facilitators to greater cycling participation, and then, follows with seven recommendations that could be implemented across national, state and local levels.



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Setting the scene

Cycling is becoming increasingly popular in Australia. Between 2001 and 2006 the number of Australians aged 15 years and older who cycled in the previous 12 months increased by 244,500, with 1.7 million having cycled in 2006. In the same period bicycle journeys to work have risen 22% in Australian capital cities, with Melbourne achieving an increase of over 42%.

Women and older Australians are less likely to cycle, a pattern which is not consistent with international cycling prevalence data. Countries with high rates of cycling for transport and recreation have few gender and age differences in cycling, while countries such as Australia, which have relatively low rates of cycling (particularly for transport), have large gender and

1.7 million Australian adults cycled in 2006

age differences in cycling. Cycling also appeals to a large number of people who wish to avoid high impact forms of physical activity.

Intervention to encourage cycling

An overview of the Australian cycling sector and current interventions is included in this report. The interventions include cycling events attracting thousands of people, behaviour change programs targeting ride to work and school, social marketing campaigns and multifaceted community based programs.

These programs are successful in encouraging people to take up cycling or ride more often but their reach is currently limited and effectiveness will be enhanced with the development of more supportive physical environments, such as bicycle lanes and paths.

Australia has a comprehensive network of cycling organisations including grassroots sporting clubs, bicycle user groups, touring clubs and informal community groups. It also has a number of state and national bodies which have established partnerships with Government and the private sector to create more supportive environments for cycling and healthy living. There is considerable potential to promote and encourage cycling through these community groups and organisations.



For 2006, the economic benefits of combined recreational and commuter cycling is conservatively estimated to be \$227.2 million



Current barriers and facilitators to greater cycling participation by Australian adults

Cycling participation in many industrialised countries is higher than in Australia. However, bicycle ownership in Australia is high, indicating an underlying interest in cycling, with considerable potential for increased participation.

There is a range of significant barriers to the take up of cycling in Australia. These have been described using the ecological model of physical activity and divided into five sections focused on the following factors influencing cycling. This report also provides evidence-based options for overcoming these barriers.

- Individual factors
- Social and cultural factors
- Environmental factors
- Safety
- Policy and regulation

Individual factors

This review found that a lack of skills, confidence and knowledge are all significant barriers to cycling. Consistent Australian research indicates that motivations for cycling are principally focused on individual concerns, such as health and fitness. With this in mind, measures to increase cycling participation include the provision of riding skills classes and the development of mass marketing campaigns focusing on key motivations such as health, social interaction, and the convenience and low cost of cycling for transport. Large-scale cycling events are also effective in promoting cycling participation. These events are not simply one-off activities. Participant surveys consistently indicate that cycling events generate increases in pre and post event cycling.

In addition, it may be necessary to challenge widely held perceptions that act as barriers to cycling, such as the need to be 'super fit' in order to start and the perception that cycling in traffic is inherently hazardous.

Social and cultural factors

Social and cultural factors were found to have an important influence on cycling levels. Lower socio-economic groups are less likely to make short trips by foot or bicycle and the physical environment in some low income areas is less conducive to active forms of travel. However the marked social gradient evident for leisure time physical activity is less prominent for cycling. This highlights the role of bicycle riding in promoting more equitable participation in both physical activity, and personal mobility for population groups who cannot afford cars (up to 30% in some suburbs).

Social norms which tend to exclude women, older Australians and culturally diverse groups from cycling can be challenged through information and education campaigns. It is also necessary to address Australia's current culture, whereby short local trips, which can readily be undertaken by bicycle, are almost invariably completed by motor vehicle.

Environmental factors

The evidence reviewed in this report identified the physical environment as a key influence on cycling. This was divided into general urban design features and bicycle specific infrastructure.

Urban Design

The literature is very clear on the influence urban design and land use planning has on 'walkability' and this can generally be extended to include cycling. For instance, low density development, with zoning that separates residential and commercial development was found to increase travel distances which acts as a barrier to cycling. Higher density, mixed use development works to reduce average trip distance and this makes cycling and walking more attractive.

There is growing evidence that low density neighbourhoods with poorly connected street networks affect how much time we spend walking, cycling and our ability to use public transport

Research Australia, 2007, p. 15

Bicycle Infrastructure

Domestic and international literature highlight the important impact bicycle infrastructure provision has on cycling participation. Although exceptions can be found, the overwhelming trend identified in this report is that well designed and connected bicycle infrastructure encourages participation and a lack of it is a major barrier for non-cyclists, infrequent-cyclists and even regular riders.

Australian cities and towns generally lack integrated networks of good quality bicycle paths and lanes and this is a significant barrier to greater participation.

Long term reform in urban design to create more compact, vibrant urban and regional centres is vital. Widespread adoption of bicycle friendly design, such as integrated, connected on and off road bicycle routes is essential.



Secure bicycle parking and showers at workplaces were also found to help more people make the daily commute by bicycle.

...it is imperative that new suburbs be planned with active transport in mind, so that bike routes are laid down when the streets and sewers are mapped out.

Senator Penny Wong
Minister for Climate Change and Water

This report also found a strong case for better integration of bicycling with the public transport system. In countries with high rates of cycling, such as the Netherlands, some 38% of train journeys begin with a bicycle trip. Developing a strategic network of bicycle routes to transport hubs, providing secure bicycle parking at stations and facilitating the carrying of bicycles on public transport have all been shown to be effective methods of encouraging cycling and have a high level of applicability to the Australian context due to its low density land use.

This report also examined the effect of 'invisible infrastructure' on cycling. Invisible infrastructure refers to policy measures and general design features that indirectly impact on cycling, rather than specific bicycle infrastructure. Material reviewed in this report show invisible infrastructure offers cost effective benefits that often result in win-win situations, whereby cyclists and the wider community benefit. For instance, lower speed limits result in more attractive conditions for cyclists, whilst at the same time increasing safety for all road users and improving neighbourhood amenity.

Safety

Surveys and focus group research reviewed for this report show safety concerns to be among the most significant barriers preventing people from cycling, including among those who cycle regularly.

Safety concerns were found to be amplified by aggressive motorist behaviour. Motor vehicle speed is both a perceived and actual safety hazard for vulnerable road users such as cyclists. An accident at 64km/h puts cyclists at 17 times the risk of a fatality than if the vehicle was travelling at 32km/h.

A combination of speed, volume of traffic and a lack of designated space for people to ride were found to be significant barriers to cycling. This was exacerbated by aggressive driving and features as a regularly reported deterrent to cycling.

These barriers can be reduced by implementing neighbourhood speed limits of between 30km/h to 40km/h, road user education and improved bicycle infrastructure.

The perception of risk from cycle accidents is often disproportionate to the actual risk. However, perceptions of risk were found to decrease with cycling experience. Whilst acknowledging the legitimate concerns people have to bicycle riding, the evidence demonstrates that in Australia, per 100,000 participants, an individual is seven times more likely to be hospitalised playing football than riding a bicycle. Risk-benefit analyses consistently report that the health benefits of cycling outweigh the risks by factors ranging from five to one, to twenty to one.

Another consistent feature in the literature is the robust finding that the more cyclists there are, the safer it becomes. In fact, if cycling doubles, the risk per kilometre falls by 34%.

Policy and regulation

A range of factors affect the public's health and many of these fall beyond the traditional role of the health sector. Policy and regulatory factors governing such issues as speed limits, urban design and density and motor vehicle access are all examples of non-health sector issues that have a powerful impact on the public's health.

Given the influence that such factors can have on health, health impact assessments have been identified as a helpful policy tool to better understand the impact various projects have on overall wellbeing.

Establishing a cycling-friendly policy and regulatory environment is a significant challenge and one that is not entirely within the direct control of the health sector. A multi-faceted, whole-of-government approach is required. Each of the following recommendations are largely dependent upon one another and should be implemented in an integrated, coordinated way to increase bicycle participation.



Recommendations

This summary has highlighted the need to overcome some significant barriers to further promote regular cycling among adult Australians. The following interventions are recommended to meet this challenge:

1 Mass Marketing Campaigns

To promote the multiple health, environmental, transport, economic and social inclusion benefits of cycling, and address perceived barriers such as safety, required fitness level and road user behaviour. These campaigns can be supported through the extensive network of cycling organisations around Australia and should be combined with bicycle infrastructure improvements.

2 Bicycle Education Programs

To increase confidence and skill levels in both the child and adult population.

3 Behaviour Change

Programs such as TravelSmart, Ride to School and Ride to Work programs: To help more Australian children and adults make the daily commute and other trips by pedal power.

4 Cycling Events

To encourage infrequent and novice riders to cycle in a supportive social environment.

5 Urban Design

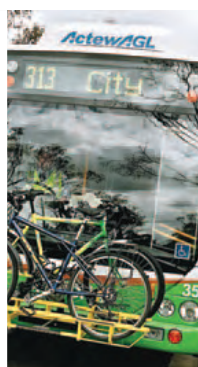
To create a physical environment more conducive to cycling, such as higher density, mixed use development and shorter trip distances.

6 Improved Bicycle Infrastructure

To provide safe, attractive and enjoyable on and off road bicycle routes as well as high quality end of trip facilities. The health sector can provide a powerful advocacy voice for intersectoral action to provide supportive environments for cycling.

7 Funding

To better reflect the role and value of cycling in a range of areas including transport, health and sustainability, with support from all levels of government.





Conclusion

Australia currently faces a number of emerging health challenges, many of which are caused in part by increasingly sedentary lifestyles.

Cycling is an effective method of helping to reduce sedentary lifestyle diseases such as cardiovascular disease, obesity and diabetes. As Australians continue to lead increasingly busy lifestyles, cycling is in a unique position for its ability to enable people to integrate

physical activity into everyday living. Active communities also have stronger social connections and improved liveability.

Cycling also offers a wide range of additional benefits when used as an alternative to the private automobile. Cycling is a carbon neutral, petrol free form of transport, simultaneously helping Australians fight climate change and reduce fuel costs. For peak hour journeys in

particular, the bicycle can reduce congestion and increase the efficiency of the transport system.

Yet for all these important benefits to be realised, a number of challenges need to be overcome. The health sector can play a key role in promoting this popular, but under-utilised form of physical activity.



As Australians continue to lead time poor lives, cycling is in a unique position for its ability to integrate physical activity into everyday living, especially through the use of the bicycle as a form of transport and active recreation.



Cycling offers an effective form of physical activity, providing significant contributions to public health. When used as an alternative to motorised transport, cycling is an effective method of reducing greenhouse gas emissions, congestion and increasingly expensive fuel costs



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