Heart Foundation

# Blueprint for an Active Australia

Third edition

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*Cover photo courtesy*
*SA Government Way2Go Program*

*We acknowledge that the Heart Foundation is spread across many of our traditional lands; we pay respect to all traditional owners of these lands and those who under custodial law are charged with nurturing and protecting country. We pay our respects to the Traditional Owners of these lands and to Elders past, present and emerging.*

# FOREWORD

It gives me great pleasure to introduce the third edition of the Heart Foundation's *Blueprint for an Active Australia*. This publication is the result of collaboration between the Heart Foundation and Australia's leading experts on Physical Activity. It presents an irrefutable and urgent case for change and presents evidence-based actions that can form the basis of a community-wide approach to address the major public health problem of physical inactivity.

Heart disease remains the single leading cause of death in Australia with one death every 28 minutes. Around 650,000 Australians report that they currently have heart disease. Physical inactivity contributes over 20 per cent of the burden of heart and blood vessel disease in Australia and so investing in solutions to Australia's rising inactivity levels should be a national priority.

The good news is that physical activity can significantly reduce heart disease risk and the burden of a range of other chronic diseases, as well as improve mental health. We also have good knowledge of the evidence-based initiatives investment that will work best to increase physical activity levels.

The Australian National Physical Activity and Sedentary Behaviour Guidelines recommend that an adult should accumulate 150 to 300 minutes of moderate-intensity physical activity (such as brisk walking) per week, or 75 to 150 minutes of vigorous-intensity physical activity per week. The guidelines also recommend that the time spent in prolonged sitting be minimised and that long periods of sitting be broken up as frequently as possible. Our children and young people require one hour of moderate-to-vigorous physical activity per day to meet guidelines.

Australia is not doing well in meeting these guidelines. Nearly six in ten adults, three quarters of seniors and over eight in ten children and young people are not active enough for good heart health. This ranks Australia among the world's most inactive nations.

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The *Blueprint for an Active Australia* summarises the compelling evidence for action to increase physical activity in Australia. It outlines a holistic approach to solving Australia's inactivity problem, including initiatives such as:

- investing in walking as the most prevalent and popular physical activity that is accessible to most Australians
- building and supporting healthy and active environments that create spaces and places for walking, cycling and recreational physical activity for people of all ages
- incorporation of physical activity programs in schools, workplaces, health care and aged care settings
- the delivery of affordable and accessible physical activity programs for the prevention and management of heart disease and other chronic diseases
- increasing support for sporting and active recreation clubs and facilities, and
- public education about the benefits of physical activity and to motivate participation

Overcoming the many barriers to physical activity requires a response across society, led by governments and implemented at the community level. At the federal level the Heart Foundation is calling for the Australian Government to fund development and implementation of a National Physical Activity Action Plan to implement the actions in the *Blueprint for an Active Australia* and commit to an active and healthy future for all Australians.

The action areas in this document provide a blueprint for change towards an Australia that better reflects the healthy, fit and outdoors-loving image that is so often portrayed as representing the culture of this country.

**Adj Prof John G Kelly AM**
Group CEO
National Heart Foundation of Australia

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# ACKNOWLEDGEMENTS

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*We call for the Australian Government to fund development and implementation of a National Physical Activity Action Plan to implement the actions in the Blueprint for an Active Australia and commit to an active and healthy future for all Australians.*

# INTRODUCTION

The National Heart Foundation of Australia presents the third edition of the *Blueprint for an Active Australia*, outlining the case for change for a more physically active Australia. The evidence and interventions presented in the second edition have been expanded and updated across thirteen action areas.

While each action area targets a different area of research expertise, the *Blueprint for an Active Australia* has been informed by a shared commitment to increasing Australia's investment in preventative health, including physical activity and to the delivery of this investment in a manner that benefits all Australians, including those experiencing disadvantage.

## PHYSICAL ACTIVITY: A DAILY DOSE

If we think of physical activity as a medication and its adult dose as 30–60 minutes per day, there is scarcely anything else we could take daily that would provide such comprehensive health benefits. Physical activity is accessible to almost everyone and has little or no cost.

***Our daily dose of physical activity can significantly reduce the risk of Australia's leading killers: heart disease, type 2 diabetes and some cancers. Physical activity can also improve mental health.***

The health effects of physical activity are compelling. However, the potency of physical activity as a policy investment for Australia extends far beyond health. Active living plays a key role in broader economic and social goals for our nation:

- walking, cycling and public transport are affordable and sustainable solutions to traffic congestion
- these same behaviours contribute to cleaner air, reduced carbon emissions and sustainable environments
- active neighbourhoods and cities are more liveable, with higher levels of social capital and community cohesion and lower levels of crime
- in the context of an ageing community, physical activity enables older Australians to live more active lifestyles with reduced risk from disabling and costly chronic diseases
- fit and active workers are more productive, take fewer sick days and make a positive contribution to our economic wellbeing.

*Targeting individual behaviour is only one part of the equation in achieving a more active Australia.*


## THE POLICY CONTEXT

### Australia

Policy priorities across sectors and related funding decisions at the federal, state and local levels can have a direct impact on opportunities to be active and on access to environments and facilities that enable active living. Coordination is vital as there is no single solution to increasing physical activity or sector that can do it on its own.

### Federal leadership

The federal government plays a key role in supporting strategic investments that enable the delivery of physical activity policies and initiatives. National priorities among these are:

- **the Australian Government to fund development and implementation of a National Physical Activity Action Plan to implement the actions in the Blueprint for an Active Australia and commit to an active and healthy future for all Australians.**
- support regular monitoring and robust evaluation and research
- develop, regularly update and implement national physical activity and sedentary behaviour guidelines for adults and children
- ensure a process for securing high-level expert advice, including establishment of a cross-sector committee for national leadership and physical activity policy coordination.

The Heart Foundation welcomes the recent policy leadership developments at a federal level including launch of the National Sports Plan which includes a bold commitment to reduced inactivity among Australians by 15% by 2030.[1]

However, to achieve this goal will require sustained investment to 2030 in a funded National Action Plan that sustains current initiatives and extends initiatives across sectors including health, education, sport, environment, transport and regional development.

### State and territory leadership

State and territory governments have a key role in supporting local strategic investment through relevant departments under their jurisdiction. State and territory departments of health, education, planning, transport and sport and recreation all have key roles in enabling policy and programs to support physical activity in communities. Many of the actions recommended in this document are the responsibility of state and territory governments.

### Local government leadership

Local government is the closest tier of government to communities and has a vital role in physical activity service provision and in providing and maintaining physical activity infrastructure such as walking and cycling paths, sport and recreation facilities, local community parks, open space and local natural areas.

### Global leadership

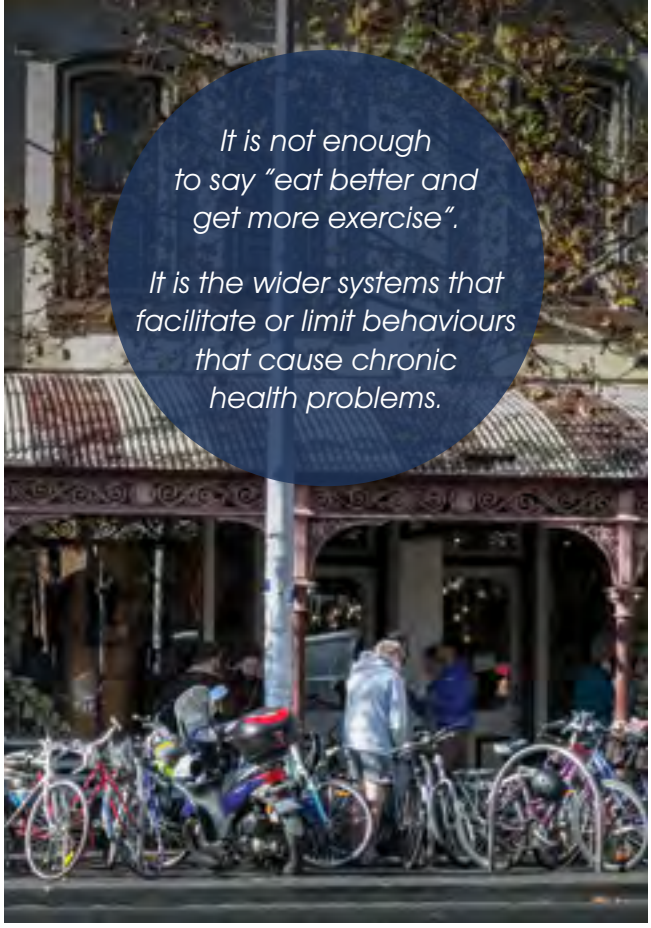
There have been significant recent advances in global physical activity policy. The endorsement by the World Health Assembly, in May 2018, of the WHO Global Action Plan on Physical Activity is a critical global milestone.[2]

The Global Action Plan is highly complementary to the Australian Blueprint. It presents updated guidance and a framework of effective and feasible policy actions to increase physical activity at all levels. It provides global leadership in describing a whole-of-society response to increasing physical activity levels across society according to ability and across the life course.

Australia has ranked in the bottom half of 168 countries involved in a 2018 World Health Organization study measuring insufficient levels of physical activity in adults around the globe. Published in 2018 in *The Lancet*, the study looked at self-reported activity levels in 1.9 million people aged 18 years and over.[3]

**The Australian Government must respond by investing in a robust and funded National Physical Activity Action Plan.**

This third edition of the *Blueprint for an Active Australia* provides timely high-level Australian evidence and guidance regarding areas for investment that, when implemented with sufficient weight, can lead to increases in population levels of physical activity.




## SUMMARY

The Blueprint contains 13 action areas; they each contribute to the central objective of increasing the amount of time that people in Australia spend being physically active.

This is an objective worth pursuing. This Blueprint calls for change.

This document recommends many approaches to overcome barriers to physical activity, reduce inequity and provide opportunities and incentives to increase participation. The recommended initiatives contained in the action areas represent an investment in improving the health of Australians and contributing to reducing the burden of cardiovascular disease and range of other chronic diseases.

The WHO and the United Nations have committed to reducing physical inactivity across the world by 15% by 2030. To achieve this target, member states, including Australia, are being encouraged to establish a multi-sectorial national committee or coalition to provide necessary leadership and coordination. Investment and leadership by the Australian Government is vital. In addition, there are roles and activities throughout the Blueprint for each level of government and for the non-government, business and community sectors.

**The 13 action areas share a similar format, each exploring the case for change under the heading 'Why is this important?', followed by the presentation of recommended initiatives and approaches in 'What must be done?'. The action areas are:**

### Action area 1 - Built environments (page 14)

explores how the neighbourhood context permeates our lives, from childhood to older age. Community and neighbourhood design impacts on how frequently we walk, cycle or use public transport and also on our participation in recreational walking and physical activity.

### Action area 2 - Workplaces (page 22)

discusses how to create healthy workplaces through initiatives such as better workspace design, progressive occupational health and safety approaches and workplace physical activity programs.

### Action area 3 - Health care (page 28)

presents the case for integrating physical activity into chronic disease treatment and risk-reduction strategies used by general practitioners and other primary-care staff.

### Action area 4 - Active travel (page 34)

recommends reprioritising transport and urban planning to reduce car dependency and increase the opportunities to ride, walk or use public transport.

### Action area 5 - Prolonged sitting (sedentary behaviour) (page 42)

examines how prolonged periods of sitting occur in many settings – in schools, in workplaces, at home in front of the television or other screen-based devices, and during travel – and recommends interventions to reduce the overall amount of time that is spent sitting.

### Action area 6 - Sport and active recreation (page 48)

highlights that participation in sport and active recreation offers social, developmental and health benefits across all age and population groups.

### Action area 7 - Disadvantaged populations (page 54)

explores barriers and the actions needed to overcome them in disadvantaged populations. People who are socioeconomically and geographically disadvantaged experience unacceptable levels of health inequities.


### Action area 8 - Aboriginal and Torres Strait Islander peoples (page 60)

explores the delivery of culturally suitable and accessible physical activity programs to promote higher levels of participation among Aboriginal and Torres Strait Islander peoples.

### Action area 9 - Children and adolescents (page 64)

discusses the inadequate rates of physical activity participation among children and adolescents; highlights the numerous physical, developmental and social benefits of participation; and recommends actions to increase participation levels.

### Action area 10 - Older people (page 72)

reminds us that sustaining, and even increasing, physical activity as we age benefits mental and physical health, and recommends interventions that can be implemented, taking into account different physical capacities.

### Action area 11 - Financial measures (page 78)

acknowledges that economic measures will influence the choices people make and details useful incentives to increase rates of active travel and physical activity.

### Action area 12 - Mass-media strategy (page 82)

covers the role of mass-media strategies in increasing people's awareness and motivation to increase their rates of physical activity. This action area recognises that media, including social media, is part of our daily lives and is an essential component in increasing Australia's rate of physical activity participation.

### Action area 13 - Research and program evaluation (page 86)

outlines the types of research and evaluation required to monitor, measure and guide the multi-level interventions featured in the Blueprint. It explores general themes in evaluation, monitoring and research rather than individual study areas.

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# ACTION AREA 1 – Built environments

*Create built environments to support active living*


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> ***More than 75% of the population of Australia's largest cities continue to live in suburbs. The implications include reduced opportunities for physical activity, social interaction, access to public transport & high motor vehicle dependency.***

## WHY IS THIS IMPORTANT?

The design of the built environment can increase daily physical activity levels by increasing the opportunities to make healthy and active lifestyle choices.

However, motor vehicle-oriented land-use and transport policies in cities are contributing to global epidemics of non-communicable diseases and injuries. The health impacts create an imperative to make use of research evidence to move city planning and transport policies in directions that are health promoting.[1]

Urban design and planning that considers health, in both greenfield and infill/retrofit development, can ensure increased opportunities for regular physical activity. This includes walking, cycling and public transport use, as well as access to recreational physical activity, sports and even community gardening.

Furthermore,

- for decades, concern has been growing about the unsustainability of post-war planning principles adopted in Australia, with segregated land use, disconnected streets, and low residential density suburbs: more than three-quarters of the population of Australia's largest cities continue to live in suburbs.[2] The implications for this type of development include reduced opportunities for physical activity, social interaction, access to public transport, as well as high motor vehicle dependency.
  These settlement patterns do not support active living choices and are also likely to be negatively impacted by changing environmental conditions linked to climate change, global warming, energy and food insecurity
- the importance of built environments to Australian population health is underlined by the high proportions of Australians who live in urban environments. Currently, over 85 per cent of Australians live in urban areas and nearly 70 per cent in the capital cities[3, 4]
- the Australian Parliament has recognised the importance of built environment planning in the context of population growth with *Building Up & Moving Out, Inquiry into the Australian Government's role in the development of cities.*[5] This was informed by Planning Institute of Australia (PIA)'s *Through the lens: The tipping point*[6]
- emphasising urban resilience, through inclusive, safe and sustainable design is critical to addressing climate change. Also, the national and international uptake of renewable energy can also help propel a required energy efficiency mode-shift toward more public transport and active transport modes, and
- creating opportunities to lead more active, healthier, lifestyles relies on good planning and design as well as the timely provision on infrastructure in both new and existing communities.

## Planning for health and wellbeing:
### built environment design considerations

- ensuring that the design of streets and public space **prioritises the needs of people over motor vehicles.** *About 80% of the public realm of a city is made up of roads.*[7] **Streets should be planned and designed according to their role as a "place" as well as their role in "movement".** As a place, a street is a destination in its own right and the design should consider the needs of people and active travel over car use[8]
- higher levels of **active travel,** including walking for transport are found in 'walkable' neighbourhoods, with higher-density mixed-use zoning, connected street networks and access to public transport, and a balance of jobs to housing[9]. Creating pedestrian-friendly streets has also been shown to be good for supporting local economies[10]
- **recreational walking** is associated with the presence, proximity and quality of **green open space.**[11] The presence of trees encourages people to walk for both exercise and transport and is associated with reduced incidence of heart attack and type 2 diabetes[12]
- providing **diverse housing in walkable environments** can help older adults to 'age in place'. **Safe neighbourhoods** with connected street networks and local shops, services and recreational facilities are associated with more walking in older adults and may protect against a decline in physical activity over time.[13-16] Physical activity can help people maintain independence, recover from illness and reduce their risk of disease at all stages of life. As people age, physical fitness can have a major impact on wellbeing[17]
- optimising neighbourhood walkability is desirable inbuilt environments. However, due consideration is required to **minimise increased exposure to traffic related air pollution**[18], which increases the risk of several acute and chronic diseases, including cardiovascular disease[19]
- lower density development is associated with lower levels of walking for transport which is likely to contribute to poorer cardiovascular health outcomes[20]. **Living in more walkable neighbourhoods is associated with lower cardiovascular disease** risk factors in men[21]
- **children** are more likely to be physically active in more walkable neighbourhoods with access to **recreation facilities close by**[22], and to **walk to school** in neighbourhoods with **connected street networks, low traffic speeds and volume**[22]. For adolescents, physical activity is associated with higher land-use mix and residential density.[23] Having access to a range of local recreational destinations also appears to limit sedentary behaviour in young people[23]
- evidence suggests that lack of personal safety can restrict adults' walking[24] and their children's independent mobility[25]. **Lower speeds** will improve liveability, improve road safety and contribute to increased rates of walking and cycling[26]
- there appears to be growing **consumer demand for more walkable neighbourhoods.**[26] This increasing demand is across a wide range of age groups and sections of society: from younger people who increasingly cannot afford to run a private vehicle, and/or prefer not to have private vehicles as they opt for active travel and/or public transport; through to older people who require facilities and services to be within walking distance to enable continued access and interaction into older age
- when **community facilities, such as schools, sport and recreation facilities, are all located near to homes and each other** - and ideally within cycling or walking distance - it enhances opportunities for physical activity, wellbeing, sports participation, community interaction and social cohesion[27, 28]
- the relationship between food and health can be improved through planning and design. At the local level, this means ensuring **healthy food options are available within walking distance of houses, as well as in schools and workplaces.** On a broader social level, improving transport and accessibility to healthy food options promotes healthy eating, particularly to the disadvantaged[29]
- the physical characteristics of an environment can support or inhibit a sense of place. **Effective placemaking considers the uses, activities, comfort and sociability of a space.** Furthermore, social connection and enjoyment of a space can be enhanced through inclusive, well connected, pedestrian friendly spaces.[27, 28]

## WHAT MUST BE DONE?

To reshape communities and neighbourhoods, **leadership and action are required by government, civil society and the private sector.** Integration of urban planning, urban design, and transport policies and practices is needed, at both local and regional levels.[1]

The following interventions are recommended to enable more active and liveable environments:

- implement policies that create communities and neighbourhoods that support active living, particularly walking
- ensure that the Federal Minister responsible for the Cities and Urban Development portfolio provides policy leadership on major cities, urban development and transport planning that embeds principles of active living
- support continued federal funding to local governments to maintain and enhance community infrastructure that promotes physical activity
- integrate urban transport and infrastructure planning to achieve compact, liveable neighbourhoods well serviced by public transport, walking and cycling and other social infrastructure (as advocated by PIA's call for a National Settlement Strategy)
- ensure planning and design for health and wellbeing is prioritised as a primary objective in all levels of planning for the built environment including National (Federal, Commonwealth), State/Territory and Local
- require major road upgrades to incorporate landscaping and tree canopy cover along pedestrian paths and at crossing points
- integrate healthy planning principles in urban planning, design and development policies, codes and regulations that support people across the life course[30]
- develop policies, standards and planning codes that ensure residents have access to a range of quality open spaces for both active and passive recreation within walking distance of homes, accessible by pedestrian-friendly routes[31]
- require health and environmental impact assessments be undertaken on larger-scale urban and transport planning developments and policies
- introduce financial incentives and measures to restrict parking and motor vehicle use to promote walking and cycling and reduce congestion
- introduce minimum net-density (dwellings per hectare) thresholds in suburban developments to create compact mixed-use neighbourhoods that promote pedestrian and bicycle-friendly environments and reduce car dependency, as well as increase the viability and accessibility of local businesses, public transport and local amenities. Heart Foundation guidance *Does Density Matter?*[32] provides further information on density and design
- ensure higher density developments are co-located with frequent public transport, and activity centres supporting a diversity of uses, job, services and high-quality public open spaces. Additional amenity makes density work and enhances community acceptance[32]
- apply sustainable urban mobility planning concepts in cities to satisfy mobility needs, improve safety and security, reduce air and noise pollution and enhance the quality of the built environment and quality of life for its citizens[33, 34]

- prioritise infill development to relieve pressure on surrounding rural land whilst ensuring there is enough urban green space, as this is important to residential wellbeing[35]
- where greenfield sites are developed in suburban, urban edge locations these must include connections to existing neighbourhoods with established facilities and centres with public transport and linked networks of walking and cycling routes. New communities must include adequate provision of community facilities and public open space
- establish the economic benefit of good design interventions, by considering the health value in addition to financial outlays. One of the ways to measure the impact of investment is with the Health Economic Assessment Tool (HEAT) for walking and cycling. This tool was developed by the World Health Organization to help organisations monetise the health benefits of reduced mortality gained by increases in walking and cycling[36]
- Australian data shows that residents in disadvantaged, rural and remote regions have lower levels of physical activity. These areas, including remote and Aboriginal and Torres Strait Islander communities, should be prioritised in funding of built environment solutions that meet community needs and meet diverse geographic and cultural requirements.

**Plan, design, develop and retrofit neighbourhoods to include the following features:**

- **mixed land use** – provide local access to a mix of shops, schools, parks and services
- encourage **medium-higher densities** – increase density around activity centres and public transport hubs to encourage public transport access, walking and cycling
- **urban design** – design neighbourhoods with high levels of street connectivity, diverse lot sizes and dwelling types, access to amenities and increased natural surveillance
- careful siting of key **community facilities** to create **walkable communities** – locate schools, public transport interchanges, shops, services and retirement housing centrally in the heart of communities within connected street networks with low traffic volumes and, in the case of retirement housing, high levels of access to shops and services
- **personal safety** – enhance natural surveillance of streets and public open space from adjacent houses and businesses
- **street design** – create streets for people, prioritising access for pedestrians, cyclists and public transport over private vehicles. Good street design creates conditions for active travel including wide footpaths, safe crossings, cycle paths, seating, lighting, street trees for shade and visual amenity, and reduction of traffic speeds
- advocate for a **30km/hr speed limit for residential streets** and in peak pedestrian areas, such as shopping precincts, schools and community facilities[37-39]

- **public open space** – provide access to a hierarchy of high-quality functional public open space suitable for multiple user groups across the life course; design to enhance safety (natural surveillance from adjacent houses and business) and provide amenities to meet the needs of different user groups
- **housing diversity** – provide dwelling choices, through a range of housing and occupancy types, to meet the needs of a diverse community throughout members' life stages[40]
- **healthy food** – consider the planning and design of food environments, retail and promotion; production space, community engagement (e.g. links with education), transport infrastructure and availability of and access to healthy food outlets
- **building design** – buildings that incorporate opportunities for physical activity, within the building and as part of an active travel trip (e.g. start/end of journey facilities)
- **sense of place** - create spaces that acknowledge culture, history, environment, encourage use, activity and are destinations and focal points for community activity.

**Implement social and community interventions that support the creation of healthier neighbourhoods:**

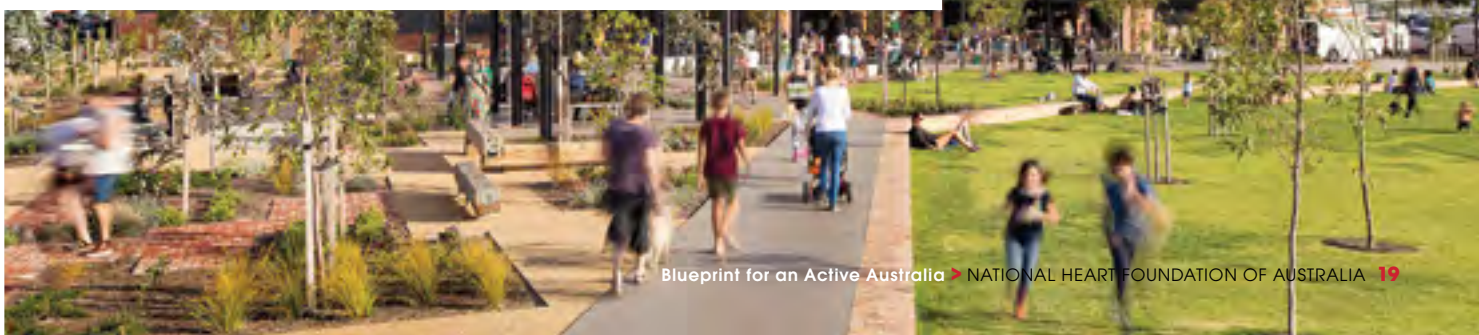
- encourage programmes of activity to ensure use and activation of public open spaces, with events and activities to provide opportunities for physical activity, social engagement and participation
- develop, implement and evaluate tools and educational strategies, build capacity of built environment professionals to embed active-living principles into their practice
- promptly remove litter and graffiti and repair damage through vandalism to enhance perceptions of safety.

**Help individuals contribute to creating and choosing active neighbourhoods and communities:**

- implement social marketing and advocacy initiatives to mobilise individuals to demand neighbourhood development that positively impacts on the community's health
- educate consumers about the availability and importance of using the Heart Foundation's neighbourhood walkability checklist, WalkScore, and other active-living tools when deciding where to live
- introduce a health-related liveability index for new developments to assist consumers to make informed choices when purchasing property.

A systematic approach to city design can enhance health and sustainability through active transport and a move towards new urban mobility. Such an approach promises to be a powerful strategy for improvements in population health on a permanent basis.[1]

*The Heart Foundation has developed Healthy Active by Design an evidence -based guide to support healthy planning and design. For more information visit www.healthyactivebydesign.com.au*



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# ACTION AREA 2 – Workplaces

*Promote physical activity before, during and after work*


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> ***In general, a physically active workforce can improve physical and mental health, reduce absenteeism and increase productivity, thereby providing important benefits to individuals and workplaces. Workplaces should see the implementation of physical activity programs as a strategic business-enhancement opportunity.***

## WHY IS THIS IMPORTANT?

Physical activity in the workplace has diminished dramatically over the past five decades,[1] reflecting the rapid increase in the computerisation of work. This has led to prolonged sitting particularly in office and administrative work. Computerisation and mechanisation have also had a negative impact on physical activity in industries such as agriculture, transport and manufacturing, with technology leading to a significant reduction in manual labour.

Consider the case for change:

- Over 11 million Australians[2] spend an average of eight hours per day in workplaces
- On average, more than two-thirds of the office workday is spent being sedentary, with much of this time accumulated in prolonged, unbroken bouts of 30 minutes or more[3] – a sitting pattern that is particularly detrimental to health[4]
- There are both long-term and short-term impacts of too much sitting. These include increased risk of type 2 diabetes, cardiovascular disease and premature mortality,[5] risk of anxiety,[6] an increased number of musculoskeletal conditions[7,8] and eye strain[9]
- There are economic implications associated with these conditions: long-term health conditions such as type 2 diabetes, cardiovascular disease and musculoskeletal disorders contribute substantially to health expenditure in Australia[7]
- The workplace is increasingly being recognised (nationally and internationally) as a priority high-reach setting for health behaviour interventions,[8, 9] extending from a labour-based approach to a public health 'healthy workers' approach[10]
- There is evidence to support the effectiveness of workplace physical activity interventions for improving both health and worksite outcomes, including physical activity behaviour, fitness, body mass index, productivity, work attendance, depressive symptoms, anxiety and job stress[11-14]
- There is also increasing evidence that reducing prolonged sitting in the workplace is feasible and acceptable to employers and employees,[15] and reductions achieved can be sustained for at least one year.[16] There is emerging evidence that these reductions may have some benefits on health and wellbeing and indicators of work performance[17, 18]
- In general, a physically active workforce can improve physical and mental health, reduce absenteeism and increase productivity, thereby providing important benefits to individuals and workplaces.[19-21] Workplaces should see the implementation of physical activity programs as a strategic business-enhancement opportunity.

## WHAT MUST BE DONE?

The workplace is an important setting for implementing interventions designed to increase levels of physical activity and reduce prolonged sitting time. These interventions should be multi-level and multifaceted, addressing individual behaviour-change techniques, mass-reach approaches (electronic and print media) and social support strategies, along with organisational, policy and physical environment initiatives[22, 23] Interventions to decrease sitting within the workplace have been shown to have minimal negative effect on work tasks.[24-26] The following multifaceted interventions will support healthier, more active and more productive workplaces:

- implement policies that encourage and support active commuting (see *Action area 4 – Active travel*)[27]
- implement workplace active travel policies that provide incentives for staff to use alternative forms of transport to attend meetings (e.g. free bicycles, prepaid public transport cards) and reduce incentives to use private motor vehicles or taxis
- integrate physical activity measures into occupational health and safety (OHS) policies and meetings; include reducing prolonged sedentary behaviour as an objective of the OHS committee[28]
- develop and use audits or checklists to assess the degree to which the workplace is 'activity-permissive'
- develop workplace policies that encourage and support regular changes between sitting and standing postures, as well facilitating incidental movement throughout the day, including through work task allocation and break schedules.

**Plan, develop and retrofit workplace environments to promote physical activity:**

- display point-of-decision prompts that encourage people to use stairs instead of a lift wherever possible as a low-cost and effective intervention[29]
- build walking tracks outside the company or a 'red-line' route to promote lunchtime walking, and provide exercise equipment and space
- provide facilities (such as showers, lockers and secure cycle racks) in the workplace to increase active transport and physical activity levels[30]
- provide appropriate onsite physical activity facilities in the workplace, as well as subsidised access to external exercise, fitness, sports clubs and facilities
- create an activity-permissive environment, including elements such as height-adjustable workstations,[31] standing tables in meeting rooms and communal areas, access to safe stairs and centralised bins and printers.

**Implement social and community interventions to promote physical activity before, during and after work:**

- provide physical activity opportunities during work breaks, including programs such as regular lunchtime walking groups[32]
- provide equitable access to programs for people with disabilities
- gain upper-management support and identify champions to serve as role models or spokespersons to model behaviour such as promoting standing breaks and participation in physical activity programs
- provide incentives for staff to use alternative forms of transport to attend meetings (e.g. free bicycles) and reduce incentives to use private motor vehicles or taxis.

**Assist individuals to understand the benefits of being more active before, during and after work:**

- distribute information and provide education about physical activity benefits and physical activity opportunities and programs
- promote the use of stairs and other physical activity facilities within or near the workplace
- communicate the effects of prolonged sitting on health; use software programs to promote standing and screen breaks
- use smartphone technology and social media to prompt participation in organised or unstructured work breaks and physical activity programs
- promote the use of active travel for commuting (for all or part of the journey)
- engage in local promotional activities such as TravelSmart Workplace programs
- create a 'dynamic' workplace culture where sitting less and moving more are the norm.[33]

**See also Action area 4 – Active travel;
Action area 5 – Prolonged sitting (sedentary behaviour)**

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# ACTION AREA 3 – Health care

*Develop healthcare systems that promote and support physical activity participation*


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> *The most common lifestyle issues discussed with GPs, were 'reaching a healthy weight' (13.6%), 'eating healthy food or improving diet' (11.2%) and 'increasing physical activity' (9.5%).*

## WHY IS THIS IMPORTANT?

The primary-care sector – which includes general practitioners (GPs), Aboriginal health workers, nurses and allied health professionals – delivers the vast majority of health care in Australia,[1] reaching all ages and most population groups. Around 84% of the Australian population over the age of 15 attends a general practice at least once a year.[2] This sizeable sector is often a person's first contact with the healthcare system and is considered by most a credible source of health advice.[3] Many studies suggest that the primary-care sector can offer valued encouragement and support for physical activity.[4–5] Leading health and medical organisations have endorsed the promotion of physical activity as part of routine care,[6-8] and there is strong support for physical activity to be treated as a vital sign in regular patient assessments.[9] The case for enabling the primary care sector to play a leading role in the promotion of physical activity is compelling.

According to the Australian Bureau of Statistics Health Service Usage Data 2014-15 the most common lifestyle issues discussed with GPs, by those aged 15 years and over, were 'reaching a healthy weight' (13.6%), 'eating healthy food or improving diet' (11.2%) and 'increasing physical activity' (9.5%).[10]

**The rationale for the engagement of healthcare workers:**

- promotion of physical activity at the primary-care level has a role to play in reducing the risk of developing chronic disease or managing existing chronic health conditions
- there are well developed evidence-based resources that can be used in physical activity promotion within the healthcare setting. Common approaches include brief advice and/or counselling, referral to structured exercise programs and provision of information and printed resources
- strategies for promoting physical activity can involve a range of health professionals including GPs, practice nurses, exercise physiologists, Aboriginal health workers and other allied health professionals. Potential strategies for health professionals are detailed in the Royal Australian College of General Practitioners (RACGP) Redbook[11]
- primary-care-based interventions solely targeting physical activity – as well as those delivered in combination with interventions for other risk factors such as diet, smoking and alcohol – have been found to be effective in recent evidence reviews[12-13]
- most interventions to promote physical activity in the primary-care setting are cost-effective[14]
- for people with chronic conditions such as coronary heart disease, diabetes, osteoporosis, arthritis and cancer, the healthcare setting is an important vehicle for promoting physical activity
- although physical activity promotion through primary health services has traditionally targeted adults, research suggests that this setting may also be an appropriate and effective setting for promoting physical activity among higher risk population groups including children, teenage girls, older adults, office workers, Aboriginal and Torres Strait Islander peoples, and people from low socioeconomic and non–English-speaking backgrounds.[11-15, 16]

## WHAT MUST BE DONE?

The primary-care sector has frequent contact with people of all ages and from a wide range of cultural and socioeconomic population groups. These interactions should be better used to increase the level of physical activity participation. The following interventions are required to support the sector to fulfil its potential as a gateway to promotion of physical activity.

**Implement policies that support the integration of physical activity into the primary-care sector's disease prevention and management strategies:**

- ensure competencies for physical activity assessment, prescription and counselling form a mandatory part of university training for medical, nursing and allied health professionals; this foundational education should include introduction to behaviour change models, practice-based learning experiences, and promotion of physical activity among students as future healthcare practitioners [17]
- integrate physical activity and chronic disease prevention into the standard professional development programs available to health professionals; this training should include information on the health benefits of physical activity, physical activity assessment risk stratification and counselling, and exercise 'prescription' for different health conditions
- develop and disseminate guidelines and protocols for integrating physical activity assessment and promotion in the healthcare setting, including screening for physical activity as a vital sign in all health checks for children, adults, older adults and Aboriginal and Torres Strait Islander populations
- develop policies and guidelines for integrating physical activity into chronic-disease care plans and risk-reduction strategies; associated referral, counselling and follow-up support should be appropriately funded through adjustments to primary-care funding mechanisms such as the Medicare Benefits Scheme and/or Practice Incentive Payment program
- expand Medicare Benefits Scheme eligibility to allied health practitioners, practice nurses and Aboriginal health workers to cover the delivery of counselling and referral to physical activity programs
- federal government to invest in the development of accessible and affordable evidence-based physical activity programs in communities and facilitate clinical decision support systems and referral mechanisms in primary care services

- provide consumer resources in waiting rooms that will educate patients on the benefits of being physically active, for example Heart Foundation consumer material[18]
- consider the use of incentives for primary healthcare practitioners to integrate physical activity into routine protocols
- incorporate the promotion of physical activity in the healthcare setting with other national health promotion initiatives to help to support greater awareness among the general public of the physical-activity-related services available through the healthcare system
- promote the implementation of clinical guidelines such as the RACGP Redbook which currently advise that physical activity be discussed every two years for adults and opportunistically for those at higher risk, including teenage girls, older adults, office workers, Aboriginal and Torres Strait Islander patients, patients with low socioeconomic status and non-English speaking background, or those at high risk of a chronic condition or cancer.

**Implement interventions in healthcare services to increase physical activity rates among practice populations:**

- Provide information and training for primary-care practitioners on physical activity promotion:
  - ensure all undergraduate medical students, and other health related trainees receive training on physical activity and health, including the role of physical activity in the prevention and treatment of a range of health conditions, as well as assessment and counselling on physical activity within the healthcare setting;
  - ensure all health professionals have access to a variety of continued professional development opportunities to enhance knowledge, confidence and skills in promoting physical activity.
- Develop and disseminate clear standardised protocols for the routine promotion of physical activity in the primary-care setting:
  - determine effective ways to use the range of primary healthcare staff, including general practitioners, practice nurses, exercise physiologists and other allied health professionals;
  - ensure physical activity is addressed as a vital sign in all health checks, including those for children, adults, older adults and Indigenous populations;
  - consistently incorporate physical activity into electronic medical records and the management and care plans for all patients with chronic conditions;
  - develop feasible protocols and practice-level systems for providing follow-up support to patients related to physical activity.

- Ensure provision of affordable, safe and evidence-based physical activity programs and opportunities:
  - health professionals should be provided with information on local opportunities to be physically active such as the Heart Foundation Walking Program;
  - ensure that appropriate and supervised activities are available for high-risk patients who might need specialist advice and supervision while exercising;
  - improved links between healthcare and physical activity providers should be developed so that patients are provided with opportunities that are well-matched to their interests, as well as their needs. Exercise and Sports Science Australia (ESSA) accredit physical activity providers that are qualified to assist.
- Ensure rigorous evaluation of physical activity initiatives in the primary-care setting:
  - physical-activity-related interventions should incorporate a minimum standard of monitoring and evaluation to support an assessment of effectiveness and cost-effectiveness.

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# ACTION AREA 4 – Active travel

*Encourage more walking, cycling and public transport use*


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> *The most effective improvement of opportunities for active travel will flow when strategic land use transport policy and planning is closely aligned with local area land use transport policy and planning.*

## WHY IS THIS IMPORTANT?

Walking and cycling for recreation and transport, and greater use of public transport, is good for health, the environment and the economy. Many Australians struggle to find the time to participate in physical activity. Active travel is an efficient means of incorporating physical activity into daily living through commuting, working, learning and socialising.

Past and present policies and practices promote the development of car-oriented built environments and car use, limiting the potential for healthier active transport.


**Consider the case for change:**

- physical activity, including walking and cycling, plays an important role in reducing the risk of cardiovascular and other chronic diseases[1] and brings with it a wide variety of benefits for physical and mental health, as well as social and community health[2, 3]
- walkable neighbourhoods with higher-density mixed-use zoning increase active travel, reduce car dependence and air pollution[4], subsequently minimising the risk of cardiovascular disease and other chronic diseases
- co-benefits of increasing walking, cycling and public transport use include:
  - health outcomes for individuals
  - sustainability through reducing private motor vehicle dependence, air and noise pollution, greenhouse gases, energy use and sprawl
  - economic benefits such as reduced passenger transport subsidies and lower road infrastructure development and maintenance costs
  - improved traffic management, including reduced congestion
  - community benefits such as increasing social connections in communities and public safety, and safer outcomes for people whom walk and cycle
  - greater equity, including improving transport choices for disadvantaged or vulnerable groups[5-8]
- in the last four decades, there has been a rapid decline in the number of children walking or cycling to school[9-11] so much so that active travel has gone from being the most common way for children to get to school to now the least common, while being driven is the most common. The results are similar for adults with very few adults choosing active travel modes of transport[12, 13]
- observational studies have consistently shown that children who walk or ride bicycles to school engage in more physical activity than those who travel by other means[14-17]
- commuters who use public transport engage in more physical activity than car drivers.[18] For example, public transport users in Melbourne achieve over 40 minutes of incidental exercise a day, compared with less than 10 minutes for car users.[19] The odds of achieving 10,000 steps per day were 3.55 times higher in a study of university students who commuted by public transport, compared with drivers.[20, 21] Active patterns of travel can be associated with a reduced risk of cardiovascular disease, type 2 diabetes and all-cause mortality in adults.[22] One study also found regular bicycle commuting is associated with a lower risk of cardiovascular disease, cancer, and all-cause mortality[23]
- there is now strong evidence that the way we build cities, communities and neighbourhoods affects the travel behaviour choices of both adults[6, 7, 24-26] and children[27] and the safety of people who use active travel modes[28]
- active transport is another important aspect of connectivity and accessibility in the urban environment. Promoting active living is a key aspect of promoting personal health, and the urban environment underpins – or undermines – people's ability to use public transport as part of their regular routines.[2]

## WHAT MUST BE DONE?

Combinations of interventions are required to effectively promote walking and cycling to increase the activity levels of sedentary people, including the provision of safe travel environments. These interventions require action at all three tiers of government and can be supported by business and professionals, particularly urban planners, developers, transport planners, engineers and building designers. Workplaces and schools are also ideally placed to promote active travel options to staff and students.

The following interventions are recommended to support the integration of active travel into the daily lives of people in Australia.

**Governance arrangements to promote active travel:**

- the most effective improvement of opportunities for active travel will flow when strategic land use transport policy and planning is closely aligned with local area land use transport policy and planning
- this is most likely to happen when governance arrangements ensure a policy/planning line of sight from state-level thinking through to local thinking, giving equal priority to top down and bottom up aspirations and efforts
- major new transport projects will be part of the top down inputs and these need to be supportive of local plans for provision of 20-minute neighbourhoods, and related initiatives, that promote active travel
- to maximise the prospects for achieving this integrated thinking in land use transport policy and planning, local government at a regional level (i.e. regional groupings of councils, of which there might be say 5-6 in each of Sydney and Melbourne), should be an equal partner with the state in developing integrated strategic land use transport plans for Australian cities. This will enable the local level to have a greater say in shaping the future of cities and is likely to result in land use transport strategies that have longer relevance[29]
- without attention to such governance reforms, implementation mechanisms for more active living will struggle.

**Implement policies that facilitate an increase in the availability and uptake of active travel modes:**

- **all governments** to include walking and cycling infrastructure as part of all large government-funded urban transport projects
- require health-impact assessments to be undertaken on larger-scale urban and transport planning developments and policies
- integrate health-planning principles and active-living design codes in urban planning, design and development policies and regulations
- reorient transport policy, planning and funding to prioritise investment in walking, cycling and public transport infrastructure; allocate resources proportionally to need or current or planned mode share, concentrating initially on underserviced areas, including developments on the urban fringe
- include active modes of travel in Mobility-as-a-Service initiatives[30]
- **federal government** to appoint a minister responsible for major cities and urban development; this adequately funded portfolio should provide policy leadership on major cities, urban development and transport planning that embeds principles of healthy living and sustainability
- ensure that federal transport infrastructure funding and policy mechanisms resource active and public transport projects and cost road projects in accordance with the total cost to the community, considering congestion, pollution and health-related impacts. (Pricing of road use and other financial measures[31] are explored further in *Action area 11 – Financial measures*)
- **state and local governments** to produce and implement appropriately funded integrated land-use strategies that are overseen by the Premier's / Mayor's office and embed principles of healthy living and sustainability, including state-wide walking strategies to increase the number of people walking for recreation and transport
- reduce posted street speeds in local streets to 30km/h to increase safety for people on bicycles and pedestrians, and to create a more welcoming environment for children[32, 33] then communicate 30km/h as a standard low speed environment to increase awareness and provide guidance in planning documentation
- introduce minimum net-density thresholds (dwellings per hectare) for suburban developments and improve the integration of land-use, transport and infrastructure planning to achieve compact, mixed-use neighbourhoods that promote pedestrian- and bicycle-friendly environments and reduce car dependency, as well as increase the viability and accessibility of local businesses, public transport and local amenities; offset high-density developments with increased access to public open space
- restrict motor vehicle access and the availability of parking at town centres, universities, airports and other highly congested environments by implementing congestion pricing or other comparable pricing schemes and by providing high-quality public transport access; reclaim streets in these locations for public transport, designated pedestrian areas and shared space
- implementing the appropriate actions in the World Health Organization's Global action plan on physical activity 2018–2030 (sections 2.1, 2.2, 2.3) regarding integrating transport and urban planning policies, improving walking and cycling networks, and strengthening road safety.[34]

**Plan, develop and retrofit the built environment to support active travel:**

- provide for supportive active transport infrastructure such as pathways, bicycle-parking/storage facilities, shade and way-showing signage, as well as public toilets, seating and other amenities in key activity centres, including accessible public transport stations and their catchment areas
- improve the fare structure, coverage, frequency and operating hours of public transport and make more effective use of existing assets, including through the restructuring of the public transport network
- increase the segregation of people on bicycles from motor vehicles, on separate bicycle paths or on protected bicycle lanes, except in very low speed environments and ensure connection to major public transport, shopping and employment centres, schools and universities
- ensure that schools are sited in neighbourhoods with connected street networks, smaller block sizes and low levels of traffic exposure, and have catchment sizes designed to encourage active travel[35]
- introduce designated car drop-off zones linked by safe walking routes 500 metres from schools to reduce traffic danger at school gates and encourage physical activity
- provide shower facilities and end-of-trip cycling infrastructure, such as accessible, safe and comfortable bicycle-parking facilities and lockers at workplaces, schools, universities, public transport hubs, shopping centres and public facilities such as libraries and community centres (e.g. include shower facilities in all disability-access toilets and bicycle parking in front of and in car parks of buildings)
- identify CBD courier hubs to increase efficiency of bicycle couriers, integrate last mile delivery solutions by small e-cargo delivery bicycles and reduce motor vehicle delivery requirements within cities.

**Implement social and community interventions that promote active travel:**

- support improvements to Australia's public bicycle and other active mode hire schemes, including better partnerships with government, better operating models and integration with public transport ticketing
- subsidise the cost of public transport, especially for people living in outer metropolitan areas
- increase access for bicycles to be taken aboard trams, ferries, trains or on bus racks through public transport networks
- invest in active school travel programs and safe routes to school to encourage more walking, bicycling and use of other active modes to school.[36, 37] For example, dedicated funding to resolve active travel black spots in the 2-kilometre radius around schools
- encourage independent mobility for older children including:
  - a school coordinator who promotes and enables active travel
  - regular mass participation events such as 'walking, wheeling Wednesdays'
  - safe routes to school, with mapped routes and safer crossings
  - road safety and bicycle / scooter education programs
  - pedestrian priority at traffic lights in the 2-kilometre radius around schools

- reduce car-parking subsidies in workplaces and use this funding to support subsidised public and active transport programs for employees
- provide incentives for employees to use alternative forms of transport to attend meetings (e.g. free bicycles, e-bicycles, scooters, prepaid public transport cards) and where possible, reduce accessibility to corporate vehicles, private motor vehicles, taxis or other motorised vehicles
- limit the car parking incentives for staff and assist in supporting use of active travel modes, where appropriate
- implement financial tax incentives that promote use of active travel modes travel to and from work.

**Support individuals to understand and advocate for the benefits of active travel:**

- support and promote walking programs that target key groups for example seniors to raise awareness of the value of walking
- implement social marketing and advocacy initiatives to mobilise community members to demand more active transport investment and healthier communities and neighbourhoods
- increase driver awareness of people on bicycles and ensure legal liability regimes place an appropriate responsibility upon car drivers in the event of a crash
- conduct localised promotional activities such as workplace travel behaviour-change programs
- educate consumers about the availability and importance of using walkability and other active living tools when deciding where to live, work or study.

**See also Action area 1 – Built environments; Action area 9 – Children and adolescents; Action area 11 – Financial measures**

*At the time of writing, new personal mobility devices such as e-scooters are being introduced in Australia. They have implications for transport policy and management. Consideration should be given to new modes that offer advantages over private car use. Overseas experience suggests a need to accelerate development of safe bicycle networks, due to the additional demand these devices generate and to minimise safety concerns. But* ***priority should always go to unassisted and assisted active transport modes, such as bicycles and pedelecs, rather than powered devices that require no human effort, to maximise the health benefits of this travel.***

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# ACTION AREA 5 – Prolonged sitting (sedentary behaviour)

***Promote opportunities and approaches to reduce prolonged sitting***


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> ***There is now strong evidence that too much sitting is associated with an increased risk of developing cardiovascular disease and type 2 diabetes and for premature death from all-causes and cardiovascular disease.***

## WHY IS THIS IMPORTANT?

Sitting is one of the most common physical human behaviours and, for many Australians, this is the position in which they spend much of their everyday life.[1]

Sitting time (sedentary behaviour), as distinct from too little exercise, is now being recognised as a population-wide, ever-present health risk, manifested in children, adults and older people.[2] There is now strong evidence that too much sitting is associated with an increased risk of developing cardiovascular disease and type 2 diabetes and for premature death from all-causes and cardiovascular disease.[3] The hazardous effects of too much sitting are strongest in physically inactive people (< 30 min/day).[4] Indeed, only very high volumes of moderate-to-vigorous activity (60-75 minutes per day - > twice the recommended level) appear to provide protection from the risks associated with sitting, whilst the greatest risk is evident in those who sit for > 8 hours per day and do less than 5 minutes/day of moderate-to-vigorous physical activity.[4]

Of course, some sitting is ok, as our bodies need to rest and recover. However, there is emerging evidence showing that being sedentary for long, unbroken periods may be particularly detrimental to health and wellbeing.[5, 6] In contrast, there is now consistent experimental evidence to support the benefits of regularly breaking up sitting time[7] with light-to moderate-intensity physical activity. The Physical Activity and Sedentary Behaviour Guidelines[8] published by the Australian Government's Department of Health now contains explicit messages relating to sitting time that are specific to age groupings. For adults, they advocate that, to reduce health risks, 'minimise the amount of time spent in prolonged sitting' and 'break up long periods of sitting as often as possible'.

***Children and adolescents spend approximately 64% of the whole day and 60% of the school day sitting, yet the National Physical Activity and Sedentary Behaviour Guidelines recommend that children 'not be sedentary, restrained or kept inactive for more than 1 hour at a time during waking hours'***

*Photo courtesy @CFJ*

Consider the case for change:

- there are both long-term and short-term impacts of too much sitting. These include increased risk of type 2 diabetes, cardiovascular disease and premature mortality[9], risk of anxiety[10], an increased number of musculoskeletal conditions[11, 12] and eye strain[13]
- there are economic implications associated with these conditions: long-term health conditions such as type 2 diabetes, cardiovascular disease and musculoskeletal disorders contribute substantially to health expenditure in Australia (estimated to be >$11 billion)[14]
- children and adolescents spend approximately 64% of the whole day and 60% of the school day sitting, yet the National Physical Activity and Sedentary Behaviour Guidelines recommend that children 'not be sedentary, restrained or kept inactive for more than 1 hour at a time during waking hours'[15-17]
- recently updated 24-hour guidelines recognise that the majority of children's waking hours are spent sitting, therefore limiting prolonged periods of sitting is crucial for their health and wellbeing[15]
- sedentary time increases most during the transition from primary school to high school, and older adolescents are the second-most sedentary group in the population after older people[18]
- high levels of television viewing and screen time are related to unfavourable body composition, higher cardiometabolic risk scores, lower cardiorespiratory fitness, and poorer self-esteem in children.[19] However, objectively measured sedentary time (using accelerometers) is not consistently associated with health outcomes in children or youth[19, 20]
- on average, Australian adults sit for nearly nine hours per day.[21] A considerable proportion of the time spent sitting throughout the day is accrued in bouts of 30 minutes or more (prolonged sitting)[5]
- high levels of sitting time (>8 hours per day) and television viewing time (>3 to 4 hours per day) have been linked to several adverse health outcomes, including all-cause and cardiovascular disease mortality[9]
- people may meet the physical activity guidelines (≥150 minutes of moderate-to-vigorous intensity physical activity per week) and yet sit for many hours each day[4]
- evidence suggests that the potentially harmful effects of sitting are most pronounced in those who are insufficiently active (<30 mins/day) and that only very high levels of moderate-intensity physical activity (60-75 mins/day) are protective against the hazards associated with high amounts of sitting[4]
- there is consistent experimental evidence that regular interruptions from sitting (starting with standing, with more benefit from moving) may help to reduce risk factors for developing coronary heart disease and diabetes[7], and can reduce musculoskeletal pain and discomfort[22]
- time spent sitting in different sedentary behaviour settings (domestic, school, workplace, transportation, aged care) is likely to have distinct determinants; as such, behaviours will be shaped by the attributes of the settings in which they occur and the social frame around such settings[23, 24]
- interventions have shown that it is feasible and acceptable to reduce children's and adult's sedentary time in key settings such as workplaces and schools.[25-27]

## WHAT MUST BE DONE?

Sitting time can be highly contextually driven and is often dictated by the setting in which it occurs. Sitting occurs across the key domains of workplace, school, childcare, aged-care, transportation and domestic settings. Accordingly, initiatives to reduce sitting are likely to be most effective when implemented with attention to the multiple influences on behaviour in these settings, including those at the individual, intra-personal, environmental, and policy levels.[28] Importantly, such setting-based approaches have strong potential for rapid, scalable and potentially sustainable changes in sitting time.[23, 24] The following interventions are recommended to support these changes.

**Implement policies that reduce the amount of time people spend sitting:**

- develop evidence-based and contextually appropriate policies for use in schools, workplaces, aged services and other settings to guide the reduction of prolonged and total sitting time
- change education curricula to integrate movement into traditional academic areas[29]
- integrate reduction of sitting time and sedentary behaviour into national policies and guidelines on physical activity and chronic disease prevention with reference to best-practice frameworks (e.g. World Health Organization Workplace Health Promotion Framework)[30] that attend to the organisational, individual and environmental drivers of prolonged sitting
- develop workplace policies that encourage and support regular changes between sitting and standing postures, as well facilitating incidental movement throughout the day[31], including through work task allocation and break schedules
- establish best-practice frameworks and supporting materials for use in schools, workplaces, aged services and other settings seeking to adopt changes that target reductions in prolonged sitting time.[32]

**Plan, develop and retrofit environments to discourage sitting:**

- design workplace, institutional, health-care and educational environments that are 'activity-permissive'[33]
- provide both sitting and standing options in environments with which individuals interact on a daily basis: for example, public transportation, work and domestic settings; this includes providing mixed height furniture options and height-adjustable desks and workstations.

**Implement social and community interventions that reduce sitting:**

- modify activities that normally involve prolonged sitting to enable regular postural and activity breaks (e.g. a stand and stretch break)
- provide early childhood educators and school teachers with evidence-based information about the benefits of breaking up total sitting time during childcare and school times[8, 15]
- develop initiatives and programs to reduce total time spent sitting, including low-cost approaches such as using point-of-choice prompts to encourage active alternatives and to avoid prolonged sitting, conducting standing and walking meetings or creating standing agenda items within meetings or classes[34]
- develop criteria for reducing prolonged sedentary time that are relevant to the circumstances and needs across life stages and for those with differing levels of health and function
- introduce family-based educational approaches that encourage parents to limit their children's total sitting time, particularly their recreational screen time (e.g. via web-based resources and information from schools); parents monitor and then selectively or non-selectively target a reduction in recreational screen-time pursuits[35]
- educate workers and students how to safely operate height-adjustable furniture to best effect from both a behavioural and ergonomic perspective.[36]

**Help individuals understand the health effects of too much sitting:**

- educate community members about the health impacts of too much sitting and ways to break up prolonged sitting time.

**See also Action area 2 – Workplaces; Action area 4 – Active travel; Action area 9 – Children and adolescents**

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# ACTION AREA 6 – Sport and active recreation

***Increase physical activity levels through sport and active recreation***


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> ***Sport has been calculated to be of great value to the Australian economy. It provides an estimated $83 billion in combined economic, health and educational benefits each year, with a return on investment of $7 for every dollar spent.***

## WHY IS THIS IMPORTANT?

Sport and active recreation play an important role in increasing the physical activity levels of Australians.[1] *Sport* has been defined as 'a human activity involving physical exertion and skill as the primary focus of the activity, with elements of competition where rules and patterns of behaviour governing the activity exist formally through organisations, and is generally recognised as a sport'.[2] *Active* recreation has been defined as those activities 'engaged in for the purpose of relaxation, health and wellbeing or enjoyment with the primary activity requiring physical exertion, and the primary focus on human activity'.[2] Participation in these activities is linked positively to physical, social and cognitive health.

Furthermore,

- sport and active recreation contribute positively to the development of confidence and social skills, social inclusion, community development, health and wellbeing, diversion from antisocial behaviour and improved self-esteem and health-related quality of life in children and youth.[3, 4] Additional benefits for children include improved fundamental movement skills and physical fitness[5]
- a 'sport for all' approach that encourages enjoyable participation in sport and active recreation across the life span is recommended in the Global Advocacy for Physical Activity[6] list of seven best investments for physical activity to make a difference to the health of nations
- adults who participate in sport are 20–40% less likely to die prematurely from all causes compared with non-participants.[7] Sport participation is also associated with improved wellbeing, and reduced stress and distress[4]
- the value of sport has been calculated to be of great value to the Australian economy. It provides an estimated $83 billion in combined economic, health and educational benefits each year, with a return on investment of $7 for every dollar spent[8]

  In 2017, it was estimated that sport creates $29 billion of net health benefits each year.[8] The latest sports and physical recreation participation data for Australia[9] shows that:

  - 45% of children aged 0-14 engage in after school physical activity or organised sport at least once per week
  - in 2016, the top ten physical activities for adults were walking (42.6%), fitness and gym (32.1%), athletics, track and field (15.8%), swimming (14.5%), cycling (11.7%), football (5.8%), bush walking (5.4%), golf (5.2%), tennis (4.8%), and yoga (4.4%)
  - in 2016, the top ten physical activities for children were swimming (30%), football (14.7%), Australian football (8%), gymnastics (7.4%), netball (7.2%), recreational dancing (7.2%), basketball (6.5%), tennis (6.1%), cricket (5.6%) and athletics, track and field (4.4%)
  - physical activity participation is increasingly supported by technology, with 39% of Australian adults utilising a form of activity tracker or wearable device. They are most common among the female young adult population, 52% of which use them to keep active.[9]
- However, there is a need to increase levels of participation in sport and active recreation, as:
  - 81 per cent of Australian children are not meeting the recommended Australian guidelines[9]
  - nearly 70 per cent of adults are either sedentary or have low levels of physical activity[10]
  - two-thirds of adults and one-quarter of children are overweight or obese.[11]

## WHAT MUST BE DONE?

Investment by governments, organisations and clubs involved in delivering sport and active recreation activities will be essential to promote and increase participation in sport and active recreation. The following interventions are recommended.

**Implement policies to promote sport and active recreation:**

- continue funding local government to maintain, improve and expand local sporting and recreation facilities
- develop public open-space policies and strategies to ensure residents have access to a diverse range of adequate quality functional open spaces for both sport and active recreation
- protect existing public open space and sports grounds to ensure facilities are available for all. Protection of existing spaces and sports facilities is particularly important in the context of development pressures for urban renewal densification sites and greenfield growth precincts. Where open spaces and sports grounds are identified for redevelopment, alternative provision should be made[12]
- existing provision should be protected unless an assessment has demonstrated there is an excess of the provision and the specific buildings or land are surplus to requirements, or equivalent or better provision will be provided as replacement[12]
- public open space and sports facilities should be designed within the context of a strategy for 'multifunctional open space'. A network of multifunctional open space created across all communities can support a range of activities including sport, recreation and play plus other landscape features including Sustainable Drainage Systems (SuDS), woodland, wildlife habitat and productive landscapes (such as community gardens)[13]
- as noted in the United Nations Sustainable Development Goals[14], provide access to public green spaces that not only address challenges associated with urbanisation and densification within cities, but also support engagement in physical activity and recreation[15]
- continue to develop and implement sports injury prevention policies and guidance for use by organising bodies, clubs and community groups, such as those by Sports Medicine Australia[16]
- facilitate cooperative planning, funding development and management partnerships between government departments responsible for education curricula and sport and active recreation. These partnerships can assist in promoting the sharing of facilities and links between schools and external sporting clubs
- schools, recreation facilities, community groups and local governments can enter into joint use agreements to overcome resource constraints and ensure equitable access for community members of all ages. They should address issues such as liability, maintenance, vandalism, crime and other safety issues and scheduling and conditions of use[17-19]

- strengthen the corporate and governance structures of sports and recreation organisations to allow for subsidised access to club membership, participation and equipment. Priority should be placed on clubs operating in socioeconomically disadvantaged and rural areas, to support health outcomes for those at risk
- sports facilities require suitable maintenance arrangements with funding, resources and programmes to ensure longevity of spaces and buildings through effective management and upkeep
- all-weather sports pitches such as artificial playing surfaces (e.g. 3G or 4G surfaces) provide an alternative to grass pitches with potential to lengthen the season of usage. Although all-weather pitches cost more than grass pitches, they can provide an alternative option, for instance where land is scarce (e.g. on constrained development sites) and there is the need to provide pitches that will be intensively used by the community.

**Improve sport and recreational facilities:**

- improve the quality and functions of public open spaces (e.g. aesthetics, facilities, amenities) to attract more user groups to sport and active recreation.[15] Evidence suggests the provision of features such as grassed areas, trees, off-leash areas for dogs as well as gardens, walking paths, water features, and wildlife support active engagement[20]
- sports buildings for indoor activity including pavilions, club-houses, changing rooms associated with outdoor public open space and pitches should be valued and maintained as important community infrastructure. The design of new sports buildings should follow design guidance for 'Buildings' in Healthy Active by Design[21]
- playgrounds typically cater to younger children, while adolescents often seek out recreational facilities (such as skate parks and basketball courts) where they can socialise outdoors with their peers in their neighbourhood.[22] These unique and changing needs must be addressed when planning and implementing recreational facilities
- sports building design should also consider inclusion of ancillary facilities that help enable people to participate in activity, such facilities include water fountains, toilets, secure cycle parking, links to walking and cycling networks
- identify opportunities to integrate sports activities and equipment with other uses, for instance integrating multi-use games areas (MUGA) with playgrounds, providing facilities for a wider age range; integrating fitness trails and outdoor gym equipment into parks and public open spaces.

**Promote participation in sport and active recreation among at-risk groups and across the lifespan:**

- programs to promote and maintain participation during key life transitions and events such as leaving secondary school, changes in employment and changes in family structure; retirement presents a significant opportunity to promote engagement in sport and active recreation with increased available leisure time[23]
- provide training and education of high-quality coaches at all levels of sport[24]

- provide sports and active recreation opportunities for people of all abilities, gender, ethnicity and religion, recognising that some cultures and religions require specific considerations to enable participation. Consultation with community is important to take account of the needs of people from culturally diverse groups
- encourage children to participate in developmentally appropriate sports at an early age and maintain this for as long as possible
- provide separate opportunities for sport and recreation by sex (e.g. ensure girls from culturally diverse backgrounds have the opportunity to use public swimming pools; provide separate classes for girls and boys)
- as sporting facilities have historically been designed for male participants, consider extent, variety and accessibility when designing and managing, or upgrading sporting facilities, to attract and support female participation[25]
- implement programs specifically for women and adolescent girls and for people from disadvantaged backgrounds or communities[26-28]
- use sport as a tool to create positive social change and tackle social issues, including health, unemployment, conflict resolution, violence and education
- provide subsidies for sporting club membership and active recreational services for individuals and families that experience socioeconomic disadvantage
- recognise the growing importance of technology to improve access to sports, groups and facilities, e.g. using social media and/or apps to raise awareness of local sports groups, recreational events, locations and activities[9]
- multi-platform media campaigns have been shown to have great impact in increasing participation, particularly if tailored to target the needs of specific groups, for instance the *'This Girl Can'* campaign initiative, pioneered by Sport England has informed *This Girl Can Victoria* in the Australian state.[29]

**See also Action area 1 – Built environments; Action area 7 – Disadvantaged populations; Action area 9 – Children and adolescents**

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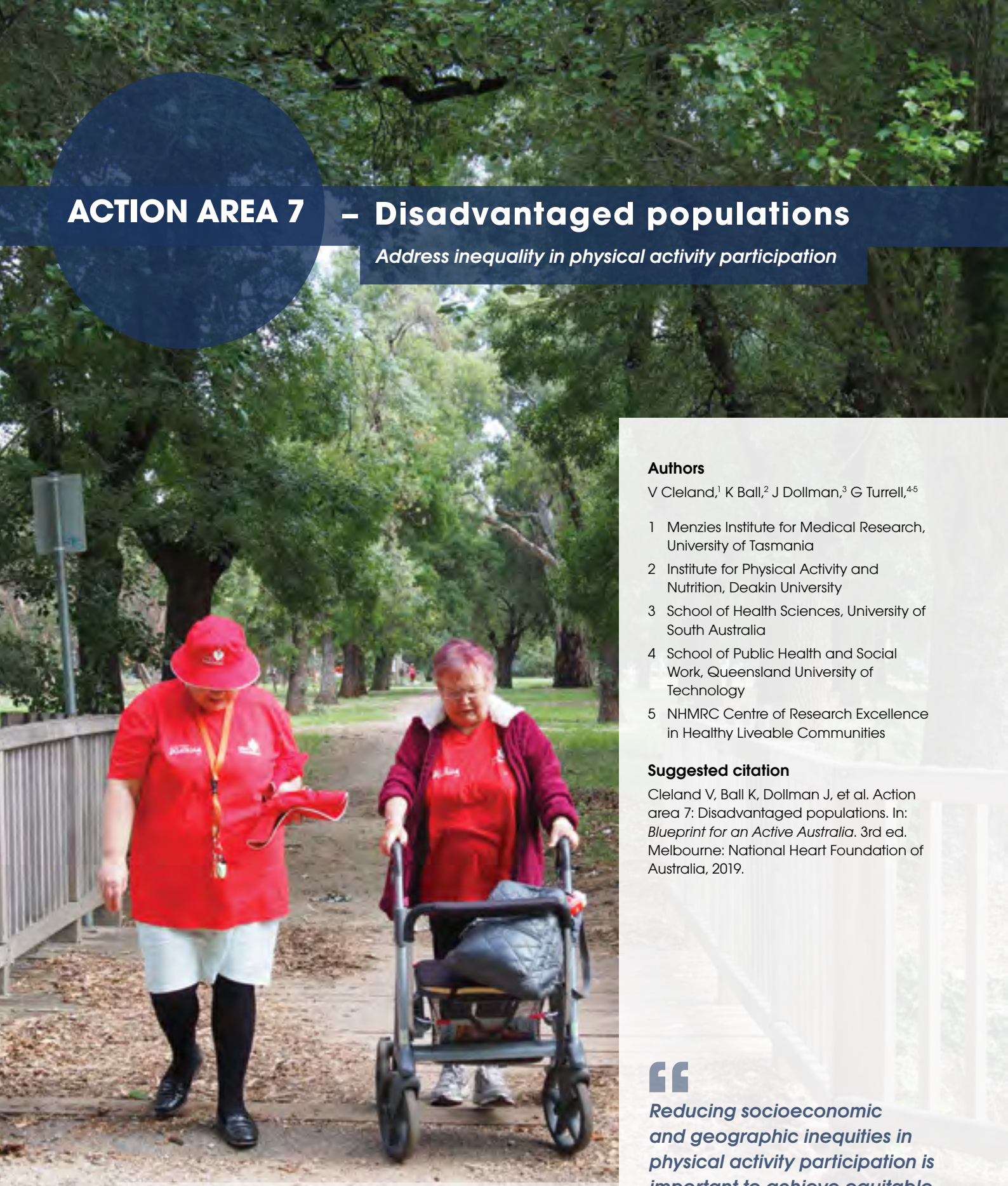
# ACTION AREA 7 – Disadvantaged populations

*Address inequality in physical activity participation*

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> ***Reducing socioeconomic and geographic inequities in physical activity participation is important to achieve equitable increases in physical activity across the population.***

## WHY IS THIS IMPORTANT?

People experiencing socioeconomic disadvantage (e.g. low income, low education level, low-status occupation or living in a socioeconomically disadvantaged neighbourhood) are significantly less likely to meet physical activity guidelines and more likely to be sedentary than more advantaged individuals. In 2014-15, the most disadvantaged Australians were 1.4 times more likely to be insufficiently active for health than the least disadvantaged Australians.[1]

This association is graded, with increasing levels of advantage associated with increased physical activity.[2,3] In addition, people living in regional and remote areas of Australia generally report less leisure and transport-related physical activity than those living in metropolitan areas,[1,4] a trend only partially explained by socioeconomic factors.[4] This association is graded, with increasing levels of advantage associated with increased physical activity.[2, 5] In addition, people living in regional and remote areas of Australia generally report less leisure and transport-related physical activity than those living in metropolitan areas,[1,4] a trend only partially explained by socioeconomic factors.[4]

Consider the case for change:

- health inequities result from a complex interaction of political, economic and structural factors, as well as the conditions in which people are born, live, work and age[6]
- reducing the physical activity 'gap' will go a long way towards reducing the inequities in heart disease, diabetes and other lifestyle-related chronic diseases[7, 8]
- reducing socioeconomic and geographic inequities in physical activity participation is important to achieve equitable increases in physical activity across the population[2]
- key factors contributing to socioeconomic inequities in physical activity participation include lack of access to good quality public open space, physical activity facilities in disadvantaged neighbourhoods, financial constraints, long or inflexible working hours, psychosocial stress, real or perceived threats to safety in disadvantaged neighbourhoods, and lack of social support or social or cultural norms that support physical activity among socioeconomically disadvantaged groups[2, 9]
- key factors that contribute to geographic inequities in physical activity participation include limited diversity of or poor-quality physical activity facilities and infrastructure in rural and remote areas, perceptions that one gets enough physical activity at work or around the home, poor road safety, and lack of social support or social or cultural norms that support physical activity in rural or remote areas[10]
- rural and remote Australia also faces significant social, demographic, economic and health challenges including increased mechanisation of farming practices and related occupational hazards, de-population and changing population composition, an ageing workforce, social isolation, poor access to services, climatic extremes, with inadequate built environment mitigation, fewer transport options, poorer road quality, exposure to changing climatic conditions, and macro and micro economic fluctuations.[11, 12]

*Photo courtesy The Arnhem Land Progress Aboriginal Corporation.*

## WHAT MUST BE DONE?

Reducing socioeconomic and geographic inequities in physical activity necessitates action at all levels of government and across many different sectors. Evidence suggests that improving physical activity opportunities at the neighbourhood level through the built and social environments are those most likely to reduce the physical activity 'gap'.[13] It is in the built environment where we can have the largest, most sustained and most equitable impact on physical inactivity levels. Healthy neighbourhood design will have the greatest benefit for our most vulnerable - the elderly, children, people with disabilities, those with heart disease and other chronic diseases and those who don't have access to a car. Efforts that only focus on individual education and behaviour change are at risk of widening inequities.[14-16]

**We call upon all level of governments and policy makers to:**

- apply a Health in All Policies (HiAP) approach to ensure action across and between a wide range of policies, partners and stakeholders at all levels. A HiAP approach helps agencies to better understand and consider the health impacts of their policies and to develop long term solutions to address the social and economic factors that influence health[17, 18]
- apply an equity lens across all policy and funding investments in public transport infrastructure and physical activity programs, with the main effort focused on the most disadvantaged communities and groups
- reorient transport policy, planning and funding to prioritise investment in walking, cycling and public transport infrastructure; allocate resources proportional to need, concentrating initially on underserviced areas, including developments on the urban fringe and in regional centres (proportional universality)[19]
- provide federal funding to local government to maintain and enhance community infrastructure in areas most in need
- ensure federal funding focuses on the delivery of accessible and affordable evidence-based physical activity programs, particularly for those poorly serviced communities and those isolated by socioeconomic, cultural or geographic attributes
- provide walking and cycling infrastructure as part of all government-funded urban transport projects.

**We call upon local governments, urban designers and town planners to:**

- plan, develop and retrofit environments that promote walking, cycling and perceptions of safety (this can be achieved by implementing initiatives contained in Action areas 1 and 4)
- work with their communities to optimise use of local facilities including sportsgrounds, gyms, community halls, schools and swimming pools; this may include off-peak access to gyms, better sportsground lighting for after-hours games or training, and facility sharing arrangements with local schools.

**We call upon the community, sports and health sector to:**

- build partnerships with communities, local organisations and groups (e.g. local government, primary-care providers, community groups, schools, youth groups, aged-care services, sporting clubs and businesses) to identify and support innovative and affordable physical activity options in areas of socioeconomic or geographic disadvantage
- mobilise communities by actively involving people who are experiencing disadvantage in the co-design and delivery of physical activity programs to ensure they are locally relevant
- support local sporting clubs to grow membership and remain financially viable by developing linkages with school sport and physical education to increase club membership and by providing user-friendly guidance on governance, revenue raising and membership recruitment
- invest in active school travel programs in disadvantaged neighbourhoods to encourage more walking and cycling to school, including safer routes to school, with mapped routes and safer crossings, road safety and bicycle education programs
- work with schools and education authorities to promote school-based physical activity programs as an avenue for reducing inequities.

**We call upon individuals to:**

- aim for at least thirty minutes of moderate intensity physical activity five times a week as part of their leisure or transport activity
- work with local services and facilities to co-design affordable and accessible services that best meet the needs within their community, to establish the best ways to frame and communicate these messages, and to disseminate easy-to-understand messages
- capitalise on the close connections within their community to encourage innovative solutions and creative models for improving access and participation in physical activity
- build local capacity by supporting group-based programs (where culturally appropriate) that encourage shared experiences and joint advocacy for better infrastructure and environment

**We call upon those implementing physical activity projects or campaigns to:**

- evaluate population-wide campaigns or programs to ensure they do not have unintended consequences or exacerbate existing social inequities in physical activity, sedentary behaviour or associated health outcomes
- help build the evidence base by reporting evaluation findings according to socio-economic, geographic and cultural background where possible. What works for some populations will not always work for others.

**See also Action area 11 – Financial measures**

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# ACTION AREA 8 – Aboriginal and Torres Strait Islander peoples

*Provide programs and opportunities to increase physical activity levels among Aboriginal and Torres Strait Islander peoples*


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Macniven R, Canuto K, et al. Action area 8: Aboriginal and Torres Strait Islander peoples. In: *Blueprint for an Active Australia*. 3rd ed. Melbourne: National Heart Foundation of Australia, 2019.

> *While further research is needed, given the increased chronic disease risks suffered by Aboriginal and Torres Strait Islander peoples, and the key role of physical activity in reducing risk, physical activity interventions (and their evaluation) should be prioritised in Indigenous communities.*

## WHY IS THIS IMPORTANT?

Rates of cardiovascular disease in Aboriginal and Torres Strait Islander peoples reflect unacceptable levels of health inequality.

**The case for change is compelling:**

- in 2017, 12% of total deaths amongst Aboriginal and Torres Strait Islander peoples were caused by heart disease[1]
- compared with non-Indigenous Australians, Aboriginal and Torres Strait Islander peoples were 70% more likely to die from circulatory diseases[2]
- physical inactivity is a contributor to the rates of chronic disease in this population, accounting for 6% of the total disease burden[3]
- while there is limited evidence regarding effective physical activity interventions for targeting Aboriginal and Torres Strait Islander peoples, there is evidence that they experience unique social, cultural and economic barriers to participation, such as negative community perceptions of exercising alone.
- there is also evidence that group programs exclusively for Aboriginal and Torres Strait Islander women are appealing and acceptable[4]
- in non-remote areas in 2012–13, 62% of Indigenous Australians aged 15 years and over reported being sedentary or exercising at low levels.[5]

While further research is needed, given the increased chronic disease risks suffered by Aboriginal and Torres Strait Islander peoples, and the key role of physical activity in reducing risk, physical activity interventions (and their evaluation) should be prioritised in Indigenous communities. Priority should also be afforded to community-driven and owned programs as there are more likely to be sustained.

Numerous examples of community programs are described in the 'grey', or informally published, literature and this is an important source of qualitative information.[6]

## WHAT MUST BE DONE?

Participation in physical activity can benefit Aboriginal and Torres Strait Islander peoples and their communities in many ways:

- making an important contribution to reducing chronic disease
- improving physical and mental health and wellbeing
- improving social factors, such as community connectedness.

In addition, physical activity can provide important cultural links through activities such as dancing, hunting, fishing, bushwalking, intergenerational programs, men's health programs and women's groups.

**Implement policies that promote higher levels of physical activity participation among Aboriginal and Torres Strait Islander peoples:**

- policy and funding investments in physical activity programs to include an equity focus, with main effort focused on the most disadvantaged communities and groups
- establish a fund to enable programs with proven effectiveness to be sustained and to be made available to Aboriginal and Torres Strait Islander peoples
- provide funding to build capacity and skills in Aboriginal and Torres Strait Islander people to design, conduct and sustain physical activity initiatives in their communities
- implement policies and investment in ongoing Aboriginal and Torres Strait Islander cultural awareness training at all three levels of government and in the private sector, particularly for those agencies planning, developing and delivering health services.

**Provide Aboriginal and Torres Strait Islander communities with access to built environments that are conducive to physical activity:**

- provide accessible recreation facilities in Aboriginal and Torres Strait Islander communities
- provide attractive open space, shaded areas, basketball rings and safe walking and cycling infrastructure
- promote safe environments and ensure the physical and social environment in the communities is conducive to safe participation in physical activity
- implement physical activity programs that are delivered by qualified exercise staff, while building skills in the Aboriginal and Torres Strait Islander communities to conduct their own program.

**Implement social and community interventions to support Aboriginal and Torres Strait Islander peoples' participation in physical activity:**

- develop physical activity opportunities that are affordable and socially and culturally accessible to Aboriginal and Torres Strait Islander peoples
- consult Aboriginal and Torres Strait Islander peoples to ensure programs are developed in accordance with the needs and interests of local people
- with respect to local culture, tailor programs to the needs of men, women and children
- ensure all Aboriginal and Torres Strait Islander children receive quality physical education at school and have access to inexpensive recreation and sport participation opportunities in their community.

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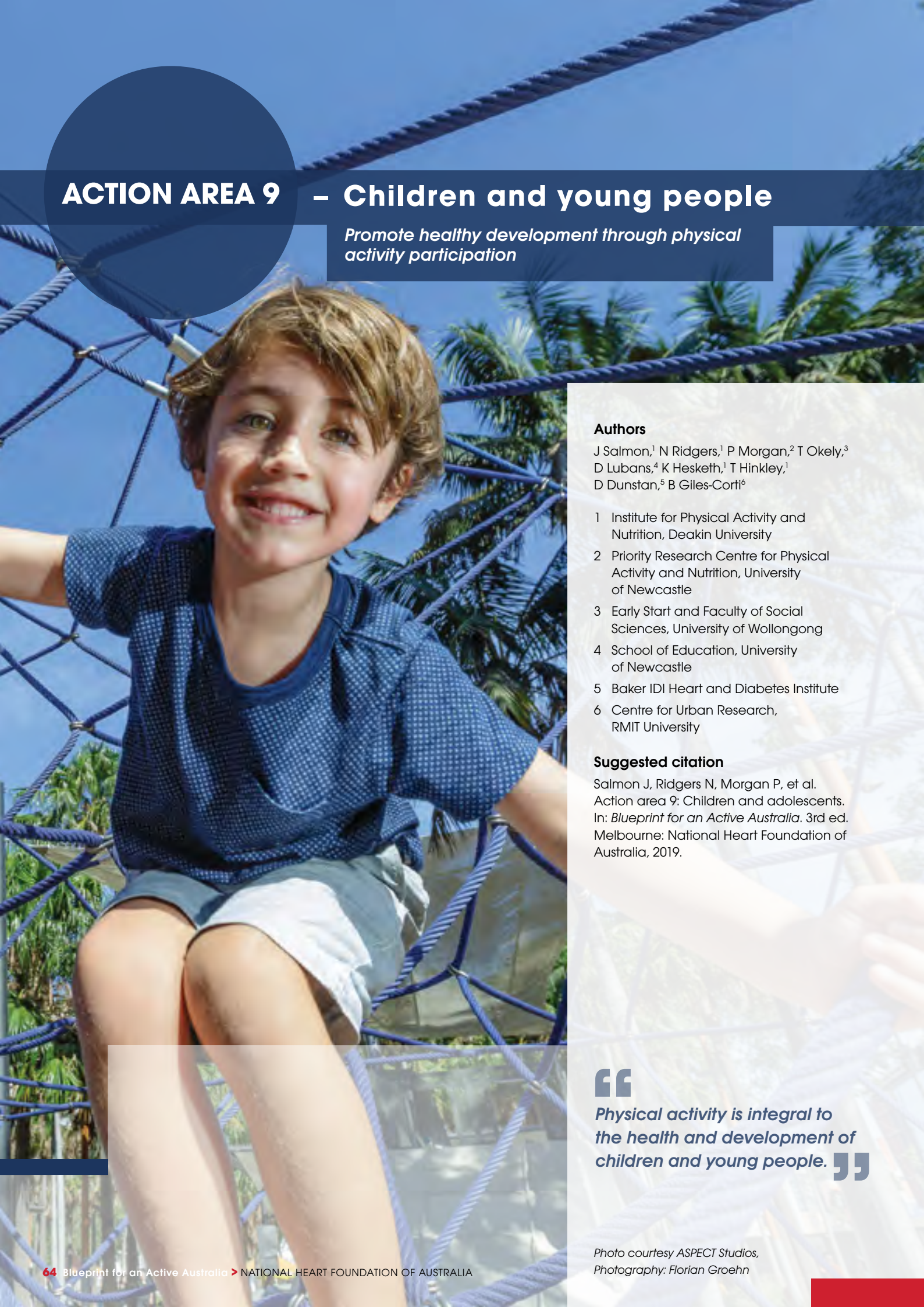
# ACTION AREA 9 – Children and young people

***Promote healthy development through physical activity participation***

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**Suggested citation**

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> ***Physical activity is integral to the health and development of children and young people.***

*Photo courtesy ASPECT Studios, Photography: Florian Groehn*

## WHY IS THIS IMPORTANT?

Physical activity is integral to the health and development of children and young people;[1, 2] it contributes to successfully navigating each of the major development phases from infancy through to adolescence. Physical activity is one of the building blocks of good health and yet evidence has shown that physical activity levels decline from early childhood to childhood and from childhood to adolescence. The evidence to support increasing the rates of physical activity among young people is overwhelming. With the release of Australia's 24-Hour Movement Guidelines for the Early Years[3] and for Children and Young People it has been highlighted that there is an important relationship between how much physical activity, sedentary behaviour, and sleep children get in a 24-hour period and their health.[3, 4]

Consider the case for change:

- Most Australian children do not currently meet physical activity guidelines. This was highlighted by the *2018 Active Healthy Kids Australia Report Card on Physical Activity for Children and Young People*, which found:
  - *Early Years (Birth to 5yrs)*

    At the National level, parent-reported data show that 72% of 2–4 year olds accumulate at least 180 minutes of physical activity every day[5]
  - *Children (5 to 11yrs) and Young People (12 to 17yrs)*
  - At the National level, self- and parent-report data show that 18% of 12–17 year olds[6] and 19% of 5–17 year olds[5] accumulate at least 60 minutes of MVPA every day
  - At the National level, self-reported data show that 13% of 15–17 year olds engage in muscle and bone strengthening activities on at least three days per week[7]
  - The mean decline in activity from childhood through to adolescence is 7% per year,[8] with declines in participation starting as young as 11 years for both males and females.[9, 10]

- Children who meet the recommended physical activity guidelines experience improved physical, social, psychological and cognitive health — and even higher levels of physical activity is associated with additional health benefits. Specifically, for:
  - *Early Years (Birth to 5yrs)*

    Participation in physical activity is associated with improved motor and cognitive development; psychosocial and cardiometabolic health; physical fitness; and bone and skeletal health[2]
  - *Children (5 to 11yrs) and Young People (12 to 17yrs)*

    Participation in physical activity is associated with improved adiposity; cardiometabolic health; physical fitness and bone health; motor skill development; quality of life; and psychological distress.[1]

## WHAT MUST BE DONE?

The following evidence-based strategies and approaches are recommended to increase the opportunities for children and young people to be physically active every day.

**Implement policies to promote and provide opportunities for physical activity in young people:**

- mandate delivery of high-quality organised physical activity, with Physical Education (PE) lessons as a core component, across the school week (at least 150 minutes per week) with a focus on lifelong engagement in physical activity and sport, and mastery of fundamental movement skills and sport skills. This should be mandated at the national level across all jurisdictions[11, 12]
- establish and maintain partnerships with the education sector with the purpose of strengthening formal preservice and in-service training for preschool, primary and secondary school teaching staff and administrators. Specifically, increasing knowledge and teaching skills on active play, quality physical education, adaptive physical activity, fundamental movement skills and physical literacy, and on how to prioritise those most in need – the least active (proportional universalism), should be the main focuses[13]
- provide funding to local government to maintain and enhance community infrastructure that is diverse, accessible and likely to engage children, of all ability levels, in physical activity (e.g. open green space, playgrounds and climbing equipment, sport and recreation facilities) and develop their movement skills and physical fitness[13, 14]
- invest in safer and more active travel through establishing policy and environmental support for active transport programs (e.g., Way 2 Go), including the improvement of walking and cycling facilities and creating safer environments that promote active travel, especially to and from school[13, 15, 16]
- implement multi-sectoral cooperation to promote links between schools and other local agencies including sport and recreation clubs and facilities, local governments and planning and transport agencies.

**Provide physical activity opportunities in early childhood education and care settings:**

- include more frequent outdoor free-play times of shorter duration rather than fewer of longer duration[17]
- for those centres that follow a structured routine, consider switching part or all the day to a free-flowing routine where children are able to move from indoor to outdoor environments at their will
- with regards to structured physical activity sessions, they should be delivered with a hands-on approach and easily incorporated into daily routines[18]
- encourage and facilitate activities that break up prolonged sitting (more than 30mins) and reduce total sitting time.[3]

**Promote and provide physical activity opportunities in primary and secondary schools:**

- comprehensive school physical activity programs[19, 20] that include curricular and non-curricular physical activity promotion elements, need to be implemented at scale (i.e., across schools nationally) to increase activity levels across the school day[13, 21-23]
- time for unstructured physical activity (during recess and lunch) should be protected and supported through the provision of equipment, spaces that engage and challenge, and encouragement from school staff[24-26]
- ensure the presence of qualified sport and PE teachers in primary and secondary schools and provide flexibility in timetabling and curriculum for sports opportunities[27, 28]
- increase physical activity levels during organised physical activity opportunities[29] through:
  - teacher professional learning (for both specialist and classroom teachers) that focuses on class organisation, management, transitions and maximising active learning time in physical education[30, 31]
  - instruction and supplementing usual PE lessons and other organised physical activities with high-intensity activity (i.e. fitness infusion/energy breaks)[32]
  - developing confidence and competence in fundamental movement skills[33]
- make changes to the physical environment:
  - provide a variety of grassed surface spaces, access to equipment[34] and playground line markings[24] that are engaging and accessible to children of various abilities and motivations
  - increase access to play areas at lunchtime[35] and outside of school hours[36]
  - provide activity-permissive classrooms through height-adjustable desks and an active curriculum (including homework)[37]
  - provide safer routes to school and establish active environments to encourage active travel[12, 13, 15, 16]
- reduce time spent sedentary through breaking up long periods of sitting as often as possible. This could be achieved by using active lesson plans or active lesson breaks.

**Promote and provide opportunity for physical activity during the after-school period and in other community settings:**

- during after-school care focus on unstructured activities (active play), modified sports and games, fundamental motor skills and providing access to school facilities;[38, 39] limit the use of screens for sedentary entertainment purposes; and encourage and facilitate breaking up long periods of sitting as often as possible
- provide greater access to facilities (e.g. public open spaces, playgrounds) in the community[13] including linking schools to community opportunities which will encourage continued participation once adolescents leave their school environments and therefore develop lifelong physical activity habits
- encourage independent mobility for older children by: nominating a school coordinator who promotes and enables active travel, establish and promote safe routes to schools with mapped routes and safer crossings and implement road safety and bicycle education programs within the schools and communities[13, 15, 16]
- collaborate with community sporting organisations, including making school facilities accessible and offering the Sporting School program[40]
- limit sedentary recreational screen time to no more than 2 hours per day and encourage breaking up long periods of sitting as often as possible.

**Promote and provide opportunity for physical activity within families:**

- provide programs that target parents and caregivers[41] and incorporate parent training, family counselling or telephone-based interventions[42], which:
  - target parenting practices and beliefs relating to physical activity
  - provide education on optimising the home, social and physical environments to maximise physical activity opportunities and minimise sedentary recreational screen time[43]
- provide information on local opportunities for co-physical activity[44] that are suitable for families and free or low-cost ideas about ways that families can incorporate co-physical activity into their daily routines
- provide guidance to families as to the importance of establishing healthy sleep patterns which should include: consistent bedtime routine, avoiding screen time before bed time and keeping screens out of bedrooms[3]
- provide guidance for parents on appropriate amounts of screen time for themselves as well as their children.[45]

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# ACTION AREA 10 – Older people

*Support healthy and active ageing*


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> *Increasing levels of physical activity is one of the most important steps older adults (defined here as age 65+, or 55+ for indigenous people) can take to improve and maintain their physical, social and mental health, and quality of life.*

## WHY IS THIS IMPORTANT?

In 2017, 15% of Australia's population of 25.3m million people were over 65 years of age. By 2047, this proportion is projected to increase to 22%, and because today's 65-year olds can expect to live (on average) another 21 years, there will be proportionally more 'older-old' people (>85 years).[1] In light of the known contributions of physical activity to the prevention and management of chronic disease, maintenance of functional status, and the preservation of physical independence in ageing, it is now even more imperative to promote physical activity for healthy ageing.

The definition of 'older people' generally relates to those over the age of 65 years, and to those over the age of 55 years for the Indigenous population. However, people in these age groups have a variety of physical and cognitive capabilities, characterised by relatively good physical function in the 'young old' to sometimes severe impairment in the frail elderly. It is important, therefore, to tailor strategies to reflect these diverse capabilities.

**Consider the case for change:**

- increasing levels of physical activity is one of the most important steps older adults (defined here as age 65+, or 55+ for indigenous people) can take to improve and maintain their physical, social and mental health, and quality of life[2]
- although 7 in 10 older people rate their own health as good, very good or excellent, more than half have chronic health problems.[1] There are demonstrated benefits of physical activity for both preventing, or delaying the onset of, and managing a range of these chronic health problems (including cardiovascular disease, diabetes, musculoskeletal conditions, mental health problems, dementia, and some cancers)[2, 3]
- 1 in 5 older people have a disability in the form of a severe or profound core activity limitation.[1] Regular multicomponent and muscle strengthening activities (ranging from conventional aerobic and resistance training, to numerous other forms of exercise, including sport, yoga, tai chi, dancing, virtual reality training etc) can improve and maintain both physical and cognitive function, improve social connectedness, prevent falls, maintain capacity to independently cope with activities of daily living in old age[4-6]
- in 2014–15, 35% of people aged 65 and over reported being sufficiently active (doing more than 150 minutes of physical activity over 5 or more sessions) during the preceding week (compared with 48% of 18-64 year olds). More than one quarter (28%) reported doing no physical activity at all.[7] In 2004-2005, only 15% of older Indigenous Australians (55+ years) met the current physical activity guidelines (National Aboriginal and Torres Strait Islander health survey).[8] More recent data suggest that older Indigenous people spend more time walking for transport (19 minutes/day on average) than non-Indigenous people the same age (10 minutes/day).[9] Data from the Australian Longitudinal Study on Women's Health show a decline of more than 50% in the prevalence of meeting physical activity guidelines between 75 and 87 years[10]
- if older people do not have the capacity to meet physical activity guidelines, lower volumes of activity (and light intensity activity) will help to prevent and manage health problems and improve quality of life.[5] Higher volumes and higher intensity will lead to more benefits
- in addition to lack of regular physical activity, sedentary behaviour may also impact negatively on health. Older people spend more time watching television than their younger counterparts and objective measures of sedentary time show increasing sedentary time with increasing age.[11, 12]

## WHAT MUST BE DONE?

As the numbers of older people in the population will increase at an unprecedented rate over the next 20 years, innovative population efforts to promote greater levels of physical activity in this group will be required, both for older adults' individual health and quality of life, and as a strategy to reduce the rising costs of health, disability and aged care services. A whole system multi-strategy plan to promote physical activity, prevent loss of muscle strength, and maintain good balance among older adults must include individual, social, environmental and policy strategies that are appropriate to age and function.[5, 13]

Current evidence suggests that interventions to promote physical activity among older adults are generally effective in the short term, but that there is uncertainty around the most beneficial intervention components and longer-term effects (12 months). Tailored strategies with a combination of cognitive behavioural strategies, focusing on increasing light-moderate physical activity are most effective. In addition, strategies should take into account specific factors that are meaningful to older adults, such as social and environmental support, and the enjoyment of being physically active.[13]

The following strategies are recommended:

**Implement policies that support older people to live physically active lives:**

- develop, implement and fund an integrated and comprehensive Active Older Australians strategy to increase levels of physical activity (including sport and recreational activities, and active transport) among all older Australians, including Indigenous older people, Veterans, and people from different cultural and linguistic backgrounds. This is important as 33% of our current older population were born overseas; two thirds of these in a non-English speaking country[1]
- encourage governments to enhance the capability and capacity of community organisations and primary-care providers and their staff, to support the delivery of age-appropriate, accessible and affordable evidence-based physical activity programs, as a means of both reducing chronic disease risk, contributing to the management of existing conditions, and increasing social networks
- implement planning guidelines that account for the variety of mobility and functional capabilities of older adults when designing road crossings, pedestrian infrastructure, public transport access, public open space and recreational infrastructure, as well as when designing retirement and aged-care housing[14]
- introduce policy mechanisms to mandate the delivery of physical activity programs in aged-care services and settings.

**Plan, develop and retrofit environments to provide older people with more opportunities to participate in physical activity:**

- to promote wider uptake of walking, implement the strategies contained in *Action area 1 – Built environments* but with a focus on encouraging older people to walk (e.g. benches for resting, access for people with walking aids, low traffic areas, and easy access to shops and services)
- in residential aged-care settings, promote activity-permissive environments by providing safe and aesthetically pleasing walking paths, shade and weather protection, and other facilities that will encourage both walking and a range of other physical activities.[14]

**Implement social and community interventions that support older Australians to live more active lives:**

- as social support is a key determinant of both healthy ageing and physical activity in older people, encourage participation in community groups that offer social and physical activities (e.g. Heart Foundation Walking). This may improve social wellbeing, especially following significant life events in older age such as retirement, moving-house, or bereavement, when social networks may change[15, 16]
- design health, sport and recreation centre programs to meet the needs of young-old, mid-old and older-old people, including offering a variety of opportunities to improve aerobic fitness, muscle strength, flexibility and balance; encourage better use of existing infrastructure and organisations, especially sports clubs, by retaining existing older members and encouraging new ones[17]
- provide community-based programs that meet the needs of older adults and increase motivation, reduce barriers and build community connections; include a wide range of activities, for example, walking groups (with and without poles to aid balance and prevent falls), seniors swim clubs, water aerobics classes, dance classes and Tai Chi/ Qigong[18-22]
- improve access to community-based or in-house programs, including virtual reality training (exergaming) in all residential aged care facilities.[23, 24] Programs should be targeted to all residents, including those in nursing homes[25]
- implement home-based physical activity interventions, with support by telephone (e.g. monitoring and physical activity counselling), video or internet (e.g. live feedback during exercise); these can be as effective as supervised exercise programs and may be an option for helping housebound older people to be more active[26]
- train health professionals to help older people, especially those with health problems or mobility restrictions, to become more active. Strategies may include health coaching,[27] referral to an exercise professional or to an evidence-based physical activity program, or use of technology to cue regular breaks from sitting[11]

**Help older individuals to understand the health benefits of living a more physically active life and of breaking up prolonged sitting time:**

- design and implement a mass-media campaign tailored to the needs and motivations of older adults in accordance with age, and physical and cognitive capacity. Promote images of active older people as role-models for healthy ageing.

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# ACTION AREA 11 – Financial measures

***Provide financial incentives to make active choices cheaper and easier***


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> ***"The formulas for calculating the costs and benefits of many Australian transport, planning and health policy priorities do not accurately reflect the impact these choices have on communities, health and the environment."***

## WHY IS THIS IMPORTANT?

Prices influence behaviour and choices, particularly among people on lower incomes, pensioners and unemployed people. Through financial incentives and disincentives, we can promote healthier behaviours. In turn, adoption of healthier behaviours creates savings for the country. The formulas for calculating the costs and benefits of many Australian transport, planning and health policy priorities do not accurately reflect the impact these choices have on communities, health and the environment.

The case for change is significant:

- costing formulas fail to fully account for the impact of private motor vehicle use on the health and wellbeing of communities and the environment, while transport modes of walking, cycling and public transport are not recognised for their wider benefits[1-5]
- low income should not be a barrier to participation in physical activity. Families on low incomes, older adults and Indigenous Australians are more likely to live in outer metropolitan areas or in rural communities with limited or ageing physical activity infrastructure and without the benefits of good public transport services available, compared to those living closer to the centre of cities[6, 7]
- socioeconomically disadvantaged members of the community are further disadvantaged by:
  - transport policy and urban planning that is dominated by the car (rather than public transport, walking and cycling[8, 9]
  - urban planning that fails to support incidental physical activity and provide for accessible physical activity, sport, recreation, walking and cycling[10]
  - high costs associated with participating in some physical activity, recreation and sporting activities.

## WHAT MUST BE DONE?

It is vital that policies are implemented to correct market-pricing failures and ensure equitable access to physical activity opportunities. The following interventions are recommended.

**Implement financial policies and regulations that support and promote more physical activity:**

- conduct an inquiry to determine opportunities for public policies to favourably influence affordability of physical-activity-related products and services; examine mechanisms such as pricing, taxation, grants and subsidies
- reorient transport policy, planning and funding to prioritise investment in walking, cycling and public transport infrastructure; allocate resources proportionally to need, concentrating initially on underserviced areas, including developments on the urban fringe
- ensure transport project analysis frameworks include wider benefits and dis-benefits when considering funding priorities
- provide financial incentives to make public transport, walking and cycling cost competitive with driving and parking
- ensure that car users are charged for the costs their travel choices impose on the wider community, using the revenue raised to improve walking, cycling and public transport choices, especially for lower-income communities[2, 11]
- manage car parking demand at Central Business Districts and Activity Centres through increasing parking charges with revenue used to improve access by walking, cycling and public transport
- charge parking fees at train station car parks and use the revenue to improve station facilities
- encourage public transport use by continuing to financially support services and subsidise fares, especially in outer metropolitan suburbs

- increase the availability of free secure bicycle storage facilities at Activity Centres and places of employment
- provide free or subsidised bicycle, e-bike and e-scooter share services at train stations and activity centres to increase their catchment for non-car modes
- provide financial incentives for people who choose to ride bicycles for transport (e.g. the UK's 'bike to work scheme' enables the costs of purchasing and running a bike to be paid with pre-tax dollars if people commit to cycle to work 50% of the time)[12]
- provide increased scope for tax deductibility for physical activity participation (such as club memberships, sporting equipment, exercise classes, bicycles and clothing) in a range of settings
- withdraw import taxes on power assisted pedal bicycles for use in Australia
- develop a system to provide subsidised sporting club fees for children, especially to families that experience financial hardship
- provide subsidised user fees for community services such as swimming pools and recreation centres, especially in poorer urban suburbs and depressed rural communities
- provide fringe benefits tax exemption for workplace packaging of sporting and health club memberships, bicycle purchases and public transport use
- provide "parking cash out" equivalents for staff who do not utilise free car parking when it is provided at the workplace
- provide dedicated federal funding to local governments to maintain and enhance community infrastructure that promotes physical activity.

**Implement social and community interventions that incentivise participation in physical activity:**

- financially reward people who make active travel choices through local business and workplace incentives (e.g. a Victorian company pays an annual bonus to staff based on the number of times in the year they rode, walked or caught public transport to work)[13]
- fund workplace based TravelSmart programs, Workplace Travel Plans and/or Transport Management Associations to encourage greater use of walking, cycling and public transport, and use these programs to identify incentives that are likely to support travel behaviour change[5, 14, 15]
- fund 'free days' on public transport to encourage new users to try the service[14, 16]
- provide targeted subsidies to increase participation for:
  - children from disadvantaged families to participate in organised sport and sporting clubs
  - national scheme for safe routes to school with incentives and an engagement platform
  - subsidised entry fees to gyms, community recreational facilities and sports clubs
  - participation in evidence-based physical activity programs (primary-care link)
- provide affordable and accessible physical activity options in the poorest metropolitan suburbs and rural and remote communities to improve equity and access
- promote subsidised entry to a range of physical activity opportunities for individuals and families with a lower socioeconomic status
- develop and trial new models of transport service provision for a range of sustainable and healthy transport modes via the concept of 'Mobility as a Service'.

*At the time of writing, various states are exploring options to group and deliver a range of public and active transport modes to customers as 'Mobility as a Service'. Developing new mobility services and online platforms to secure these outcomes is desirable, especially where they encourage use of modes such as public bikeshare.*

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# ACTION AREA 12 – Mass-media strategy

*Promote the benefits of physical activity*


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> *Mass media is effective in setting a community agenda around physical activity and in increasing awareness. It serves to inform, remind, motivate and support health-related change.*

## WHY IS THIS IMPORTANT?

The central role of mass media campaigns is to increase whole-of community understanding of a health issue, shape an agenda for change and influence knowledge, attitudes and behaviour towards physical activity.[1] Mass-media strategies are effective in achieving these objectives when based on sound theory, are adequately resourced and implemented in combination with community physical activity programs, policies and environmental changes. Mass media remains an important tool for reaching whole populations, in creating new healthier social norms and influencing healthy behaviour choices. Contemporary mass media campaigns should always consider the judicious inclusion of new media and digital technology to add to the mass-reach communications components of physical activity campaigns.


**Consider the case for change:**

- mass media is effective in setting a community agenda around physical activity and in increasing awareness. It serves to inform, remind, motivate and support health-related change[1-6]
- media campaigns have achieved positive results when based on sound theory and research and when combined with community-wide activities, programs and facilities[1, 3, 6-8]
- a comprehensive approach should comprise multi-platform communications, combining social marketing principles, community-wide programs and initiatives with traditional as well as social and digital media strategies, integrating campaign themes across the overall community-wide physical activity promotion effort[9, 10]
- the media can increase awareness, change social norms, stimulate increases in help-seeking behaviours (e.g. calls to helplines) and influence beliefs and attitudes[11]
- online social media, digital and mobile technology has considerable potential for supporting mass-reach communications.[12-14] A review of 72 unique internet-based physical activity interventions, found 44 (61.1%) reported significant increases in physical activity.[13] Current evidence indicates that social media-based campaigns in health promotion are suitable to complement but are unproven as a substitute for traditional mass media such as television[15]
- a recent review of 18 mass media campaigns implemented on national, regional and local levels with or without supportive community activities, found 11 had a significant impact on physical activity behaviour, one reported unsustained change, and four no significant effects on physical activity behaviour[6]
- a meta-analysis of nine adult campaigns found mass media had a significant effect on promoting moderate intensity walking but may not lead to achieving recommended levels of overall physical activity.[16] However, meta-analytic data may be difficult to interpret for policymakers where exposure (to the campaign) and the physical activity outcomes are quite heterogeneous
- a review of the impact mass-media campaigns on low socio-economic status (SES) groups found mostly equitable or better impacts for low SES groups. However, to reduce inequalities mass media campaigns need to be specifically designed to ensure that images, casting, language and messaging are designed to maximise appeal and relevance for low SES populations.[4, 5]


## WHAT MUST BE DONE?

The interventions proposed in this document should be supported by an integrated and sustained mass-media strategy that promotes the uptake of physical activity throughout the population.[17] This strategy should be sensitive to the needs of different age groups, levels of disadvantage, physical abilities and cultural preferences. Best practice checklists for mass media campaigns addressing physical activity, such as the FLOWPROOF protocol, should be used for planning, implementation and evaluation.[18]

Noting that mass media campaigns to promote physical activity are identified as a "best buy" by the World Health Organization[19] the following interventions are recommended:

- include mass media campaigns in national physical activity plans and strategies.[20, 21] This would require sufficiently resourced and sustained physical activity mass-media strategies that include both traditional and digital media strategies, over a period of 5 years or more
- combine traditional media with social and digital media communication strategies to explore and leverage the potential of communication technologies, specifically the internet, mobile smart phone technology and mobile and digital physical activity tracker devices
- complement mass-media strategies with community-wide activities and programs linked through a well-developed national physical activity plan (including community programs, sport programs, cross-sectoral interventions, and specific mass events) to create a broader social environment designed to encourage a culture of valuing physical activity in Australia.

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# ACTION AREA 13 – Research and program evaluation

*Support the implementation of physical activity initiatives through research, monitoring and evaluation*


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> *Many of the interventions proposed in the Blueprint offer multiple benefits; measuring these 'co-benefits' will assist in quantifying the overall societal impact of the interventions.*

## WHY IS THIS IMPORTANT?

The *Blueprint for an Active Australia* is underpinned by an 'ecological' framework, which captures the constant interaction between individuals and the social, built and policy environments in which they live, work, love and play. These interactions can positively or negatively affect cardiovascular health; therefore, multi-level interventions are needed to create cardiovascular-health-enhancing policies and environments, as well as target groups, families and individuals in workplaces, schools and community settings.

This section considers the types of research and evaluation required to monitor, measure and guide these multi-level interventions. It explores general themes in evaluation, monitoring and research rather than individual study areas.

Many of the interventions proposed in the Blueprint offer multiple benefits; measuring these 'co-benefits' [1, 2] will assist in quantifying the overall societal impact of the interventions. Apart from physical and mental health effects, multiple and varied outcomes should be considered, including productivity, environmental, economic and societal benefits.

The research community has an important role to play in informing the implementation and evaluating the effect of the initiatives contained in the Blueprint. To be effective, the interventions must be informed by policymakers, researchers and other professionals working together.

## WHAT MUST BE DONE?

Cooperation between the various sectors and disciplines is imperative to support informed, effective and measurable outcomes. The following measures are recommended to ensure the development, delivery and demonstrated effectiveness of physical activity programs and policies.


**Establish interdisciplinary research teams working in collaboration with multi-sector partners, resulting in:**

- research and evaluation that is informed by policymakers and practitioners to ensure it is relevant in practice
- the selection and use of appropriate research and evaluation tools and methods (e.g. specific to the population group or location under observation)
- evaluation that considers the multiple health behaviors (e.g. physical activity, sedentary behavior, dietary intake, smoking) that impact on heart health
- research specific to the intervention being undertaken, such as active transport, sport participation and physical activity in older people.

**Undertake policy-related research and natural experiments:**

Monitoring policy-level interventions – such as changes to built environments, the introduction of workplace sedentary behaviour guidelines or of citywide low traffic speeds –should be undertaken using a 'natural experiment' approach. This approach involves rigorously monitoring the effect of such changes and helps identify intended (and unintended) outcomes. It is therefore recommended that:

- natural-experiment study designs be implemented where possible to monitor before-and-after impacts, and that these studies be undertaken in accordance with best-practice guidelines[3]
- co-benefits across multiple sectors be assessed (e.g. health, education, recreation, transport and environment)
- cost–benefit analysis also be considered to quantify the value of the studied intervention
- priority is given to evaluating the impact of polices and infrastructure on inequalities in cardiovascular health outcomes.

**Evaluate and monitor interventions that target settings, population groups or individuals:**

Researchers and policymakers should work together to identify and, where necessary, generate the evidence to inform interventions that target individuals, settings or particular population groups. Researchers should be engaged at the earliest possible stage before designing an intervention. It is recommended that:

- where evidence is absent or limited, studies are undertaken to inform how much of a particular intervention is required before change to physical activity levels are achieved (these are often called 'dose-response' studies)
- intervention research is undertaken to establish the effectiveness of strategies to increase physical activity among Aboriginal and Torres Strait Islander peoples
- mass-media and other campaigns are monitored and evaluated for effectiveness
- innovative interventions are designed and undertaken in partnership with policymakers and researchers to quantify the impact
- where there is limited evidence to inform practice, researchers work alongside program or policy staff to generate needed research and identify related research to inform the intervention design.

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# NOTES

# NOTES


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