



Physical Activity and Health

New Zealand College of Public Health Medicine Policy Statement

Policy statement

The New Zealand College of Public Health Medicine (NZCPHM) recognises the link between physical activity and health:

Physical activity is essential to good health, with the positive benefits of activity well proven in almost every human organ system. Lack of physical activity is also one of the most significant causes of heart disease, stroke, cancer and other leading causes of death in New Zealand (NZ). Increasing physical activity is about creating environments that support everyone to be more active in their day to day lives. It is not about creating more sports people, but creating a nation of people who are active every day.

The NZCPHM calls for a National Action Plan to increase everyday levels of physical activity, to be reviewed regularly with progress evaluated every five years against its goals.

The NZCPHM calls for physical activity to be designed back into our everyday lives, specifically through:

- Transport – Transport strategy (and resource) need to be refocused to incentivise, facilitate and prioritise public transport, walking, and cycling as regular daily transport. Consideration should also be given to policy changes that reduce the existing subsidies for private car use.
- Urban design – Existing and planned developments need to be designed to encourage walking, cycling and active recreation through provision of green spaces, compact urban design and well connected, safe, active transport networks.
- Facilities/building design – workplaces, schools and public buildings should be designed to encourage and facilitate physical activity.
- Employers taking practical steps to support the everyday physical activity of their workforce.

Background

Definitions and recommended activity levels

Physical activity is any body movement produced by skeletal muscles that requires energy expenditure. Physical inactivity is a failure to meet recommended activity levels for health.¹

It is recommended that adults undertake at least 150 minutes each week of moderate to vigorous physical activity. Children are recommended to be even more active: at least 60 minutes each day of moderate to vigorous physical activity.¹

The more active people are the better. Increasing physical activity is particularly important for people who are relatively inactive. However, even active people will generally benefit from becoming even more active.

Burden of physical inactivity and sedentary behaviour

Low levels of physical activity have been highlighted in New Zealand and throughout the developed world over the last few decades. Nearly half (48%) of New Zealand adults do not meet the NZ recommendations for physical activity of 30 minutes of moderate intensity physical activity per day on five or more days in the past seven days (or equivalent vigorous activity).² This low level of physical activity has huge costs on New Zealand society. For example, a study by the Wellington Regional Strategy Committee and the Auckland and Waikato Councils examining the full costs of physical inactivity in their regions reported physical inactivity to be costing NZ approximately \$1.3 billion, or 0.7% of total GDP.³

Sedentary time (time spent seated) is also associated with an increased risk of adverse health outcomes, including cardiovascular disease, type 2 diabetes, cancer and mortality, even after adjustment for moderate-to-vigorous physical activity.^{4,5} It is very important that sedentary time is reduced and replaced with light activity (replacing seated tasks with standing for example).

Table 1. NZ Population Attributable Fraction of Physical Inactivity to Disease⁷

	Coronary Heart Disease	Type 2 Diabetes	Breast Cancer	Colon Cancer	All Cause Mortality
NZ Population Attributable Fraction	7.9% (2.9-13.1)	9.8% (4.9-15.2)	13.1% (6.2-20.3)	14.1% (7.9-20.3)	12.7% (10.2-15.4)

Insufficient physical activity increases the risk of developing some cancers. The leading contributor to heart disease in women over 30 is physical inactivity – more than smoking, high blood pressure or body mass index.⁶ Research consistently shows physical activity as one of the leading causes of premature death.⁷

Benefits of physical activity

Physical activity helps prevent most of the leading causes of death in New Zealand, including heart disease, stroke, cancers and diabetes. Table two lists the health benefits associated with physical activity.⁸ Even modest daily physical activity improves physical health and mental wellbeing.⁹ Physical activity can also assist in the management, reduction of symptoms, and rehabilitation of some health conditions.

Table 2. Health Benefits Association with Physical Activity

Health Benefits Associated with Physical Activity	
Lower all-cause mortality**	Less coronary heart disease**
Less high blood pressure**	Less stroke**
Less type 2 diabetes**	Less metabolic syndrome**
Less colon cancer**	Less breast cancer**
Less depression**	Better fitness**
Better body mass index and body composition**	More favourable biomarker profile for bone health and for preventing cardiovascular disease and type 2 diabetes**
Better functional health in older adults**	Better-quality sleep*
Less risk of falls in older adults**	Better health-related quality of life*
Better cognitive function**	
Key: ** strong evidence; *modest evidence	

The leading causes of death in New Zealand, such as heart disease, stroke, cancers and diabetes, are more common among Māori, Pacific Peoples, and low-income communities. These inequities are important contributors to the lower life expectancy for these groups. Health equity can be improved by prioritising and improving the access of these communities to physical activity.

The size of the inactivity problem belies the fact that it has been caused by a huge shift in the way we live. Over recent decades we have successfully engineered physical activity out of everyday life. Work is now largely sedentary, transport is largely sedentary, free time is scarce and hence active time is low. To fundamentally address our low levels of activity we must address the way we live, and structure everyday physical activity back into our lives.

Facilitators and barriers for physical activity

Research has identified a range of factors that can make it easier or harder to be active. Many of these factors can be changed. Urban dwellers are more likely to be active if their cities are compact with key destinations close enough to walk to. People are also more likely to be active if their neighbourhoods have good pedestrian facilities, are safe, have good cycling infrastructure, have local access to public transport, are pleasant and attractive, and include green space, parks and recreational facilities. The design of buildings and workplaces can also enable people to be more active e.g. buildings that are designed to facilitate stair use can promote activity. Important barriers to being active include high neighbourhood traffic volumes and traffic speeds, and fear of crime.^{8, 10}

A National Action Plan for physical activity

A piecemeal approach to tackling physical inactivity is insufficient. A comprehensive approach is required, where activity needs to be re-designed back into how and where we work, live and play. Underpinning this should be an explicit commitment to improving the levels of physical activity of all New Zealanders. As the causes of our physical inactivity epidemic have been years in the making, so too will the solutions take time – this is not something that can be fixed in one electoral cycle.

The NZCPHM calls for a National Action Plan to improve our levels of physical activity. Physical activity is influenced by policies and practices in education, transportation, parks and recreation, media, and business, so multiple sectors of society need to be involved in the solutions. A cross-sectoral approach with collaboration in studying, funding, commissioning, and delivering investments, policies and interventions in physical activity is needed.

A National Action Plan would provide a strong, evidence-based framework for action. It should set out a clear vision, measurable targets and clear milestones to achieving it. Increasing physical activity will require a combination of strategies aimed at the policy, environmental, social-cultural and individual determinants of inactivity and sedentary behaviour. We should aim to be a leading nation in the efforts to increase physical activity.

Towards active transport as the norm

Active transport is physical activity undertaken as a means of transport. It includes travel by foot, bicycle and other non-motorised vehicles. Public transport use is also more active than car use, since it is usually accessed by walking and cycling. There are strong links between this 'incidental exercise', and improved health. Active transport can help improve physical as well as mental health, community life, social wellbeing and community interaction and safety. The NZCPHM recommends increased investment in facilitating active transport through:

- dedicated cycle ways, especially those that physically protect cyclists from vehicular traffic (mode separation)
- safer pedestrian and cycle routes (e.g. improved lighting, mode separation)
- pedestrian priority at certain intersections (e.g. near public transport hubs)
- making active transport the attractive convenient choice (e.g. through creating pedestrian and cycle shortcuts, and plantings)

Most journeys of less than 2km could be completed by most people by walking. Most journeys of less than 10kms could be completed by most people by cycling. However, our current transport infrastructure does not provide sufficient support for either walking or cycling, as it is primarily focused on cars and trucks. Building new road infrastructure in the absence of safe, coordinated pathways for active transport is likely to increase car use at the expense of more active modes.

Policy changes are needed to reduce the existing subsidies for private car use. Roads are paid for and provided for all, not just for car drivers. Currently, car owners do not pay for the full cost of car disposal, or the environmental impact of car use and fossil fuels. Car parking prices should reflect the full cost of providing parking, without subsidies which incentivise private vehicular traffic. There should be limited, free, on-street parking that is targeted at those with mobility permits. Minimum parking ratios for building developments should be removed to increase the amount of land available for urban regeneration projects and to end this subsidy to private vehicle traffic.

Urban environments that facilitate active transport and wellbeing

Good urban design makes physical activity (particularly active transport) safe, convenient, attractive and accessible; conversely poor design makes these options unviable. For example, dispersed residential development results in long distances to workplaces which make cycling or walking to work impractical.¹¹ The low population density from such 'urban sprawl' also makes effective public

transport options not economically possible. Urban planning must establish viable transport options that are accessible and suitable for everyone, and ensure that streets are accessible by all people irrespective of age or ability. It is imperative that we reduce barriers and perceived barriers to active transport through a coordinated network of cycle and walkways in each city and design our streets as people space, not car thoroughfares.

Co-benefits of good urban planning and transport systems

As well as having a more active population, well-planned cities that facilitate active transport have a range of other benefits. Reducing car dependence reduces emissions of air pollutants, which are an important risk to the health of urban residents. Well-designed streets with lower traffic volumes and speeds are safer for all people, including walkers, cyclists and drivers. These safety improvements are particularly important for groups known as 'vulnerable road users', including children, the elderly and people with disabilities. Less car use also means quieter communities, since transport is the leading source of community noise. People living on streets with lower traffic volumes and speeds also have stronger social networks with their neighbours.⁸

Socially disadvantaged groups have poorer access to cars. As such, these groups can particularly benefit from neighbourhoods where it is convenient and safe to walk or cycle to key destinations like shops, schools, workplaces, health care and other social services. Communities with good access to education, employment, health care and other social services are also more conducive to good health. Making communities easier and safer to get around by walking and cycling can improve accessibility to key destinations, reduce injury risk, and facilitate activity for vulnerable population groups, thus helping to improve health equity.

Greenhouse gas emissions from transport, especially from car use, are a leading contributor to climate change. In comparison, public transport has much lower emissions per passenger, and walking and cycling are emissions-free. Transport energy use in more compact cities, which facilitate active transport, is a fraction of energy use in more dispersed, sprawling cities. Cities that are less reliant on fossil fuels are also less exposed to likely future increases in fossil fuel prices.⁸

Facilitating physical activity can have important economic benefits, by reducing the personal and social cost of illness. Health care costs due to lack of physical activity are between 1 and 2.6% of total health care costs.¹² Economic productivity is reduced by sickness due to lack of physical activity. Transport is a significant cost for families living distant from the city centre, and infrastructure provision is more expensive in developments on the urban fringe, making compact cities more affordable for both families and councils.^{13,14} In addition, denser cities have 'agglomeration benefits' for businesses that lead to higher levels of economic productivity.¹⁵ There is more spending in retail premises in areas which are accessible to cyclists for example, the Auckland Fort St shared space development was associated with an estimated four-fold increase in hospitality spend.^{16,17} Thus, in addition to the health and environmental advantages, there is a strong economic case for cities and transport systems that promote activity.

Recommendations

The NZCPHM calls on central and local governments to transform our neighbourhoods and cities into places that are easier to be active, and to substantially increase investments in walking, cycling and public transport infrastructure.

Specifically, the NZCPHM recommends that central and local government:

- Prioritise Māori, Pasifika, and low-income communities when promoting physical activity and at all levels of the National Action Plan to improve health equity
- Promote cities that are more compact, in which key destinations are accessible by walking, cycling, and public transport
- Redesign neighbourhood streets to make them safer and easier to get around by walking and cycling, and safer for children to play near streets
- Prioritise walking, cycling, and public transport in the planning and financing of transport systems and urban development
- Increase expenditure on walking, cycling, and public transport infrastructure, and reduce expenditure on infrastructure for cars
- Reduce the cost of public transport relative to car travel

The NZCPHM recommends that workplaces, schools and public buildings be designed and fitted to encourage and facilitate physical activity:

- Buildings should have showers for all staff
- Stairs in buildings should be attractive, safe, and visible and promoted as the principal means of travel for those who are able to climb stairs. Point of decision prompts to encourage their use should be utilised, particularly by the stairs and escalator
- The design of offices should encourage activity and minimise sedentary behaviour (placement of kitchens, toilets, and other amenities at locations that require short walks from workstations)
- Older buildings can be made to enhance physical activity through dedicating existing areas as venues for physical activity (gyms, stretching/yoga station)
- Make bike parking facilities safe and conveniently located, while requiring car parking to be out of the way of the main entrance for pedestrians and cyclists.
- Provide secure areas for bike storage and lockers for student/staff use

The College recommends that employers take practical steps to support the everyday physical activity of their workforce:

- Develop an organisational physical activity policy focussed on increasing active transport uptake, options for physical activity throughout the workday and creating a workplace culture that supports staff to be active every day
- Use price signals / subsidies to promote physical activity (e.g. free bike parking, car parking revenues redirected to staff wellbeing and physical activity)
- Employers can offer stand-up desks, walking meetings, physical activity at lunch breaks, onsite exercise equipment, exercise classes, and subsidised gym membership

Links with other NZCPHM policies

Transport
Climate Change
Sustainability
Health Equity

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