

The Senior Exercise Park – an active outdoor space for older people in the community

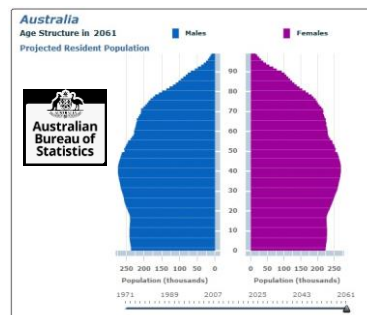
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Australian ageing population

Over the next 40 years, the proportion of the population over 65 years will almost double to around **25%**

The number of Australians aged 65 and over is expected to increase rapidly, from around 2.5 million in 2002 to **6.2 million in 2042**



The Ageing Australian Population and Future Health Costs: 1996-2051
Moller, J. 2003, Commonwealth of Australia, Canberra.
Victorian State Trauma Registry, 2011, Department of Health, State Government Victoria.



Australian ageing population

Falls - leading cause of mortality and morbidity in people aged 65 years

Approximately **30%** of older people over the age of 65 years experience a fall every year.



The Ageing Australian Population and Future Health Costs: 1996-2051
Moller, J. 2003, Commonwealth of Australia, Canberra.
Victorian State Trauma Registry, 2011, Department of Health, State Government Victoria



Some scary facts....

Lack of physical activity and sedentary behaviour, common in older people, links to **all-cause mortality**^{1,2}.

Only 25% of those aged **65 and** over meet the recommended physical activity guidelines (AIHW 2018³)

¹Harvey JA, Chastin SF, Skelton DA. 2013. Prevalence of sedentary behavior in older adults: a systematic review. Int J Environ Res Public Health. 10:6645-61.

²de Rezende LFM, Rey-Lopez JP, Matsudo VKR, Luiz OC. 2014. Sedentary behaviour and health outcomes among older adults: a systematic review. BMC Public Health. 14:

³Australian Institute of Health and Welfare 2018. Physical activity across the life stages. Cat. no. PHE 225. Canberra: AIHW



GLOBAL ACTION PLAN ON PHYSICAL ACTIVITY 2018-2030

MORE ACTIVE
PEOPLE FOR
A HEALTHIER
WORLD



“Increasing physical activity requires a systems-based approach – there is no single policy solution”

GOAL TO REDUCE
PHYSICAL INACTIVITY

BY 2025
10%

BY 2030
15%

<https://www.who.int/ncds/prevention/physical-activity/gappa>



1 CREATE ACTIVE SOCIETIES

SOCIAL NORMS AND ATTITUDES

Create a paradigm shift in all of society by enhancing knowledge and understanding of, and appreciation for, the multiple benefits of regular physical activity, according to ability and at all ages.

2 CREATE ACTIVE ENVIRONMENTS

SPACES AND PLACES

Create and maintain environments that promote and safeguard the rights of all people, of all ages, to have equitable access to safe places and spaces, in their cities and communities, in which to engage in regular physical activity, according to ability.



3 CREATE ACTIVE PEOPLE

PROGRAMMES AND OPPORTUNITIES

Create and promote access to opportunities and programmes, across multiple settings, to help people of all ages and abilities to engage in regular physical activity as individuals, families and communities.

4 CREATE ACTIVE SYSTEMS

GOVERNANCE AND POLICY ENABLERS

Create and strengthen leadership, governance, multisectoral partnerships, workforce capabilities, advocacy and information systems across sectors to achieve excellence in resource mobilisation and implementation of coordinated international, national and subnational action to increase physical activity and reduce sedentary behaviour.



<https://apps.who.int/iris/bitstream/handle/10665/272722/9789241514187-eng.pdf>

Outdoor exercise equipment

An important **environmental infrastructure** to provide opportunities for **physical activity** and **social connectedness** in public settings at no cost ¹⁻³

Healthy living behaviour – health promotion and a cost effective investment for increased use of park and park based physical activity ^{1,4}



¹Cohen et al: Impact and cost-effectiveness of family Fitness Zones: a natural experiment in urban public parks. *Health Place* 2012, 18(1):39-45.

²Cohen et al: The potential for pocket parks to increase physical activity. *Am J Health Promot* 2014, 28(3 Suppl):S19-26.

³Lee et al: Understanding Outdoor Gyms in Public Open Spaces: A Systematic Review and Integrative Synthesis of Qualitative and Quantitative Evidence. *Int J Environ Res Public Health* 2018, 15(4).

⁴Arena et al Public Park Spaces as a Platform to Promote Healthy Living: Introducing a HealthPark Concept. *Prog Cardiovasc Dis* 2017, 60(1):152-158.



Active environment – outdoor exercise equipment for seniors

- Exercising outdoor offers many mental and physical health benefits

HOWEVER

- Not all equipment is suitable for older people
- Limited outdoor exercise equipment specifically designed for older people available
- Limited evidence/research on effectiveness



Active environment: outdoor exercise equipment

Fitness equipment – gym machine



Active environment: outdoor exercise equipment

Fitness equipment – gym machine



Active environment: outdoor exercise equipment

Fitness equipment – cardio equipment



Active environment: outdoor exercise equipment

Fitness equipment – Balance and agility



Outdoor exercise equipment – the senior exercise park

- ✓ Functional exercises
- ✓ Movement and mobility
- ✓ Strength
- ✓ Balance
- ✓ Coordination

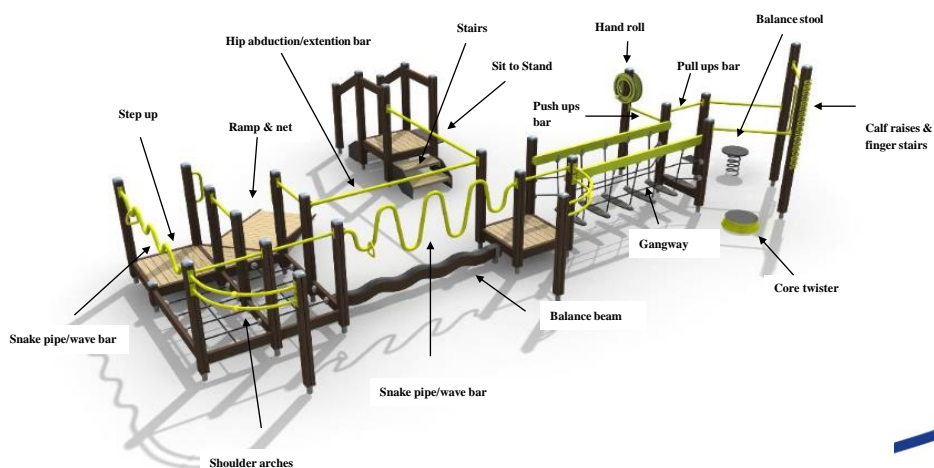


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play up workout

LAPPSET

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The outdoor senior exercise park



Size required - minimum of 12 x 9m

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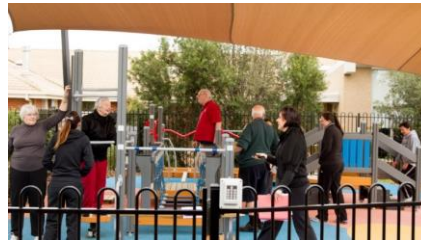


The “exercise park for older people”



Community exercise park program to reduce falls risk in elderly: a randomised controlled trial

https://www.youtube.com/watch?v=IO6jz_w5vcg



Sales M, Polman R, Hill K, Karaharju-Huisman T, Levinger P. BMC Geriatric. 15:68, 2015
 Sales M, Polman R, Hill KD, Levinger P. Journal of Aging and Health, 2016. Doi: 10.1177/0898264316662359
 Sales M, Polman R, Hill KD, Levinger P. The Journal of Aging and Social Change, 2018.8 (1), 61-78

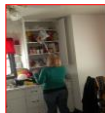


Active ageing: novel dynamic exercise initiative for older people

Objectives:

The feasibility and effectiveness of an 18 weeks exercise program **in the community** on improving several physiological, and psychosocial factors associated with the risk of falls

Functional exercises



Strength



Socialisation



Circuit-based exercises



Active ageing: novel dynamic exercise initiative for older people

Results

Improved physical function (balance, strength, function) and had high adherence and participation rate.

Qualitative analysis: **enjoyable with varied perceived benefits**.

Positive perceptions - **physical** (e.g, improvements in muscle strength, balance, flexibility, and gait), **psychological** (e.g., improved confidence, well-being, reduced depression symptoms) and **psychosocial** (e.g., improved social interaction).

Sales M, Polman R, Hill K, Karaharju-Huisman T, Levinger. P. BMC Geriatric. 15:68, 2015
Sales M, Polman R, Hill KD, Levinger P. Journal of Aging and Health, 2016. Doi: 10.1177/0898264316662359
Sales M, Polman R, Hill KD, Levinger P. The Journal of Aging and Social Change, 2018.8 (1), 61-78



Key considerations - resources

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DOI: 10.1002/hpja.60

BRIEF REPORT

WILEY

Health Promotion
Journal of Australia

Outdoor physical activity for older people—the senior exercise park: Current research, challenges and future directions

Levinger P, Sales M, Polman R, Haines T, Dow B, Biddle S, Duque G, Hill K. Outdoor physical activity for older people – the senior exercise park: current research, challenges and future directions. Health Promotion Journal of Australia. 2018, 1-7.

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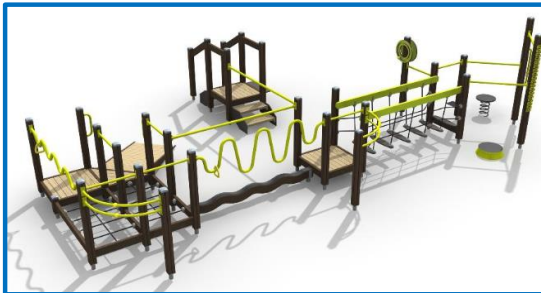
Guidelines for Planning, Installing and Activating Outdoor Fitness Equipment



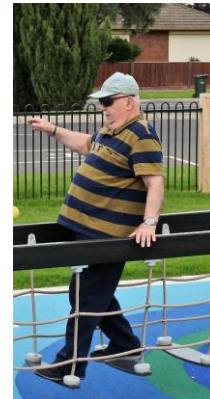
- Larger trial – implementation
- Engagement with councils
- Further funding support



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ENJOY research project - **Exercise interveNtion**
outdoor proJect in the cOmmunitY.

Active and healthy ageing in the Victorian communities
using a novel outdoor exercise park

<https://www.nari.net.au/enjoy>

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The **ENJOY** trial - **Exercise interveNtion outdoor proJect** in the **cOmmunitY**



Aims

To implement and evaluate the effects of sustained engagement in physical activity on mental health and physical outcomes.



The long term aim is to **design** and **promote** an innovative and **sustainable outdoor exercise park** and program for senior residents within the parks / grounds of participating partners.

Participating partners; Wyndham City Council, Whittlesea City Council, Old Colonists' Association of Victoria



The **ENJOY** trial - **Exercise interveNtion outdoor proJect** in the **cOmmunitY**



Population

- 65 and over
- History of falls +/- fear of falls
- No physically active (no meeting recommended physical activity guidelines)

Intervention

12 weeks structured group exercise program
6 months – independent usage

Morning tea/socialisation

following each session



The senior exercise park



The ENJOY trial - Exercise intervention outdoor project in the community





The ENJOY trial - 3 sites

Thomastown - Barry Rd Exercise park site (Whittlesea city council)

Hoppers Crossing Landsdale circuit (Wyndham City Council)

Leith park St Helena (Old Colonists' Association of Victoria)



**The ENJOY trial - Barry Rd Exercise park site
(Whittlesea city council)**



Do you want to **shape the future of age friendly outdoor space** in the Australian communities?



Future work/collaboration

Involvement of more councils in creating active outdoor space for older people in Victoria and interstate

<https://www.nari.net.au/enjoy>

Any questions- please get in touch:
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Acknowledgment



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