



# Human-Nature Connections: The importance of green spaces and urban parks for health & wellbeing

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# The Ottawa Charter for Health Promotion:

- Build Healthy Public Policy
- Create Supportive Environments
- Strengthen Community Actions
- Develop Personal Skills
- Reorient Health Services

(World Health Organization, 1986)



# Current Trends in Health:

- **Cardiovascular disease = 40% of deaths annually** (National Heart Foundation of NZ, 2008)
- **Mental illness = 46.6% of NZ population will experience mental disorder at some time** (Oakley Browne et al., 2006)
- **In 2000, mental illness accounted for 25% of the non-fatal disease burden in NZ** (NZ Ministry of Health, 2001)

# Threats to health/wellbeing:

- Increasing obesity:

Adults:	Males		Females	
	1977	2003	1977	2003
Overweight	41.5%	42.1%	26.1%	27.7%
Obese	9.4%	19.9%	10.8%	22.1%

(NZ Ministry of Health, 2004)

Children	1989	2000
Overweight	11%	20.9%
Obese	2.4%	9.1%

(Barnfather,2004)

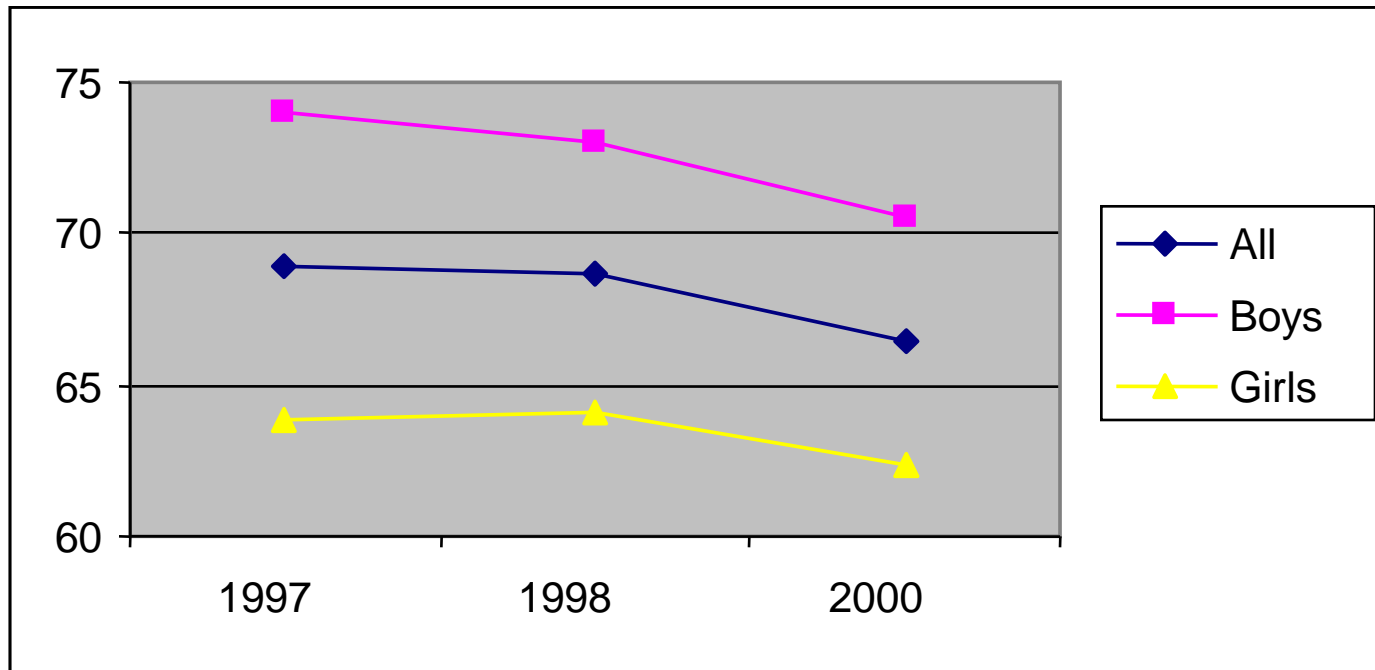
# Threats to health/wellbeing:

- Inadequate levels of physical activity:
  - 32% of NZ adults are 'inactive' (c/f. >50% of Australians)
  - Increase in sedentary behaviour among NZ young people (8% in 1997; 13% in 2001)
  - Direct costs of physical inactivity in NZ estimated at \$180 million in 2004 (SPARC, 2003) ... but
  - Australian estimates of \$377 million p.a. in 1996 have been revised to \$1.5 billion in 2006/7 (Medibank Private, 2007)



# NZ Young People

2.5 hours + physical activity per week 1997-2001



Source: SPARC. 2003. *SPARC Facts: Results of the New Zealand Sport and Physical Activity surveys 1997-2001.*



# Threats to health/wellbeing:

- Increasing rates of mental illness worldwide:
  - Mental disorder in NZ higher for Maori (29.5%) and Pacific people (24.4%) than for others (19.3%) (Oakley Browne et al., 2006)
  - Neuropsychiatric conditions = the 3<sup>rd</sup> largest contributor to the burden of disease in NZ (behind CVD & cancer) (Tobias, 2001)
  - Mental health problems associated with increased exposure to health risk factors → increased risk of poor physical health.

# Threats to health/wellbeing:

- Perceived decline in social connectedness:
  - higher death rates associated with lower social capital (Wilkinson, 1999)
  - Socially isolated:
    - stroke survival = 6.59 times less likely;
    - CHD survival = 1.59 times less likely;
    - suicide = 3.22 times more likely (Baum, 1999)

# Environment & wellbeing:

## Wellbeing depends on:

- the natural environment
- the human made environment
- social arrangements (families, social networks, associations, institutions, economies)
- human consciousness

(Australian Bureau of Statistics, 2001 p. 6)

## Wellbeing includes:

- satisfactory human relationships,
- meaningful occupation,
- opportunities for:
  - contact with nature,
  - creative expression, &
  - making a positive contribution to human society

(Furnass, 1996)



# Places, nature & health:

- Humans are dependent physiologically on nature (Boyden, 1992)
- More than 25% of world's disease burden is attributable to environmental factors (World Health Organisation, 2005)
- This figure relates only to 'environmental degradation'

# Environmental degradation:

- Climate change to affect millions via:
  - Malnutrition & consequent disorders
  - Deaths, disease & injury due to heat waves, flood, storms, fires & droughts
  - Increased diarrhoeal disease
  - Increased cardio-respiratory disease
  - Altered distribution of infectious disease vectors

(IPCC 2007 p. 7)



[www.undispatch.com/archives/2005/08/index.html](http://www.undispatch.com/archives/2005/08/index.html)

# Environmental deprivation:

- Humans are also dependent on nature psychologically, intellectually & spiritually (Wilson, 1984; Kellert & Wilson, 1993; Gullone, 2000; Suzuki, 1997; Kellert, 1997)
  - i.e. humans require contact with nature
- Explained by ‘biophilia hypothesis’ (Wilson 1984)
- Supported by anecdotal evidence – popularity of pets, flowers
- Supported by empirical evidence – no. of visits to gardens; spending on gardens.

# How nature improves health:

- By shifting thinking from being effortful to effortless, via:
  - Being away
  - Fascination
  - Extent
  - Compatibility (Kaplan & Kaplan, 1989; Kaplan, 2001)
- By providing opportunities for lonely people to give and receive affection (Bardill & Hutchinson, 1997)
- By promoting social interaction (Browne, 1992; McNicholas et al., 2005)
- By supporting & encouraging physical activity (Nieman, 2003)
- By improving human nutrition (Wakefield et al., 2007)
- By reducing the risk of dementia (Simons et al., 2006)

# School gardens as a source of nature:

- Beneficial for:

- Capacity to work with others
- Self-confidence
- Care for living things
- Attitude to school
- Interpersonal relationships (peer & adult)
- Interest in environment/nature
- Interest in learning



(Maller & Townsend, 2006)

- Expansion of kitchen garden program in schools (via Stephanie Alexander Kitchen Garden Foundation)

# ‘Community gardens’ as a source of nature:

- Internationally, community gardens → personal & neighbourhood transformation
- Local community gardens celebrate cultural diversity, promote wellbeing & foster community cohesion



# Nature contact via 'volunteer gardens':

- Physical health benefits
- Social health benefits:
  - Sense of comm<sup>y</sup>. & belonging
  - ↑ sense of safety & security for older people & for children
- Mental health benefits:
  - Shared fun “lifts the spirits”
  - serene environment → relaxation/calming effect
- Community pride & personal self esteem (Townsend, 2006)



# Key findings from TfN study of env<sup>l</sup>. volunteers:

	TfN	Controls	P-value
<b>General health (1 = v. healthy, 5 = v. unhealthy)</b>	<b>1.7</b>	<b>1.9</b>	<b>0.028</b>
<b>Annual visits to GP (doctor) (1 = &lt;1; 5 = &gt;10)</b>	<b>2.0</b>	<b>2.9</b>	<b>0.013</b>
<b>Feeling safer in local comm<sup>y</sup>. (1= always, 5 = never)</b>	<b>1.0</b>	<b>1.3</b>	<b>0.001</b>
<b>Sense of belonging (1 = str'gly agree, 5 = str. dis.)</b>	<b>1.4</b>	<b>1.7</b>	<b>0.010</b>
<b>Attracted to living here (1 = str. ag., 5 = str. dis.)</b>	<b>1.2</b>	<b>1.5</b>	<b>0.040</b>
<b>Work to impr. comm<sup>y</sup>. (1 = str. ag., 5 = str. dis.)</b>	<b>1.3</b>	<b>1.8</b>	<b>0.005</b>
<b>Opportunity to use skills (1 = always, 5 = never)</b>	<b>1.4</b>	<b>1.8</b>	<b>0.001</b>

# Therapeutic use of nature:

- Animal assisted therapy:
  - Psychiatric facilities
  - Aged care facilities
  - Rehabilitation settings
- Horticultural therapy:
  - Hospitals
  - Geriatric centres
  - Drug rehabilitation centres
  - Prisons
  - Schools for the developmentally disabled
- 'Feel Blue, Touch Green'



# FBTG Health Benefits:

- Improving mental health, confidence and self-worth
- Developing skills, taking risks and confronting challenges
- Positive cognitive changes - stress and anxiety management
- Managing depression and depressed mood
- Improving physical health
- Building social connections



# Healthy Parks, Healthy People:

- Local parks provide increased opportunities for physical activity (Knox & Whittlesea):
  - More Knox park users (87%) than non-users (82%) undertake moderate/intense physical activity weekly+
- Local parks can promote social connectedness
  - Knox study: 85% of park users claimed their use of parks → an increased sense of 'community' or 'belonging'
- Whittlesea study highlighted potential of parks to facilitate cultural maintenance & cultural exchange/understanding

# Social benefits of parks & open spaces:

Social connections



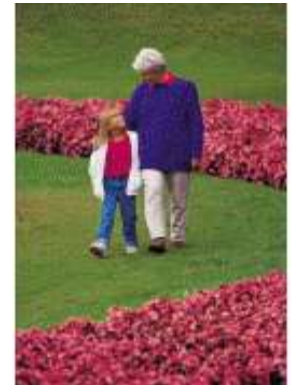
Social inclusion



Cross cultural communication

Social & cultural wellbeing

Inter-generational sharing



# Barriers to accessing nature:

- Increasing urbanisation/urban densification:
  - Government planning policies → loss of private gardens
  - Economic trends combined with lifestyle choices → more apartment living
  - ∴ local parks are increasingly important
- Changes in employment context:
  - Cultural changes → loss of 'day of rest'
  - Economic rationalism (incl. staff minimisation) → people working longer hours
- Lack of awareness/acknowledgement of need for nature contact
- Climate change



# SES as a factor in park use:

- Comparative study of local parks in Geelong:
  - Of 502 respondents, 53.3% in low SES areas & 35.1% in high SES areas visit parks only occasionally
  - Low SES respondents less likely:
    - to consider their area safe for walking after dark;
    - to believe their area has a reputation for being safe; and
    - to believe most people can be trusted

(Leslie, Townsend, Henderson-Wilson & Kremer, 2008)



# Other barriers to local park use:

- Knox:
  - Security & safety issues
  - Vandalism & rubbish
  - Lack of shelter & seating
  - Lack of maintenance
  - Lack of awareness/info.
  - Conflicts of interest b/w. user groups
  - Anti-social behaviour
  - Access issues
- Whittlesea:
  - Perceptions of lack of safety
  - Physical hazards (eg. broken bottles, used syringes)
  - Lack of amenities (seating, shelter & drinking water)
  - Lack of maintenance & cleanliness
  - Lack of information/language barriers
  - Anti-social behaviour (incl. drugs & racial/ethnic taunts)

# Addressing the barriers:

- Urbanisation:
  - Make sure some of the 'urban infill sites' remain 'unfilled'!
  - Encourage eco-design, incl. more green elements to increase access to nature plus reduce the heat-island effect
- Employment:
  - Support companies which foster worker health through walking programs, plants in offices & downtime for workers
  - Lobby governments for family-friendly work policies
  - Provide plants and gardens for workers to enjoy





# Addressing the barriers:

- Learn from & work with our indigenous peoples:
  - Nature is inherently spiritual, and humans are an integral part of it (Metzner, 1995)
  - Acknowledge the ecosystem as “the support system that sustains people physically, culturally, and spiritually” (Maller et al. 2008 p. 31)
  - Recognise the importance of land and nature contact:
    - “I need to convince people that when we talk of our Country as being central to our existence we are not engaging in flowery words; we really are talking of life and death” (Flick, 1998 p. 16)
  - Undertake research to identify those suffering environmental deprivation
  - Implement education programs, health promotion programs, lobbying campaigns, support structures and practical projects to address those inequalities



## Addressing the barriers:

- See climate change as an opportunity as well as a threat:
  - Recognition of the urban heat island effect may promote greater awareness of the need for green spaces →
    - A chance to create more urban green spaces
  - The notion that we only value things when they are threatened may be true of the natural environment →
    - A new attitude towards the environment, perhaps even prompting serious strategies to mitigate climate change
- CC and its threat to sporting clubs and physical activity may jolt us out of our “we’ve always done it this way” mentality →
  - New models for sporting events e.g. breakfast, twilight, indoor
  - New collaborations e.g. more effective use of community resources
  - New approaches to water as a resource (recycling, reuse of stormwater, etc.)



# Using urban parks for mental health promotion:

- Promote mental health by:
  - Providing for passive as well as active recreation
  - Providing restorative, relaxing environments
  - Encouraging not only use but ‘engagement’
  - Working with health services to have parks seen as a health resource
  - Encouraging ‘Friends groups’ to be actively inclusive

# Using urban parks for physical health promotion:

- Ensure that parks:
  - Are positioned to optimise accessibility (< 400m.)
  - Are landscaped to enhance safety & attractiveness
  - Provide for greater range of uses
  - Provide safe off-leash areas for dogs
  - Provide shelter & facilities

# Using parks to promote social/cultural wellbeing:

- Ensure that parks:
  - Are designed for accessibility & social interaction
  - Use universal signage
  - Host special events in parks (eg. multicultural festivals)





“Everybody needs beauty as well as bread, places to play in and pray in, where Nature may heal and cheer and give strength to body and soul alike.”



John Muir (1838-1914)  
Founder of the Sierra Club



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