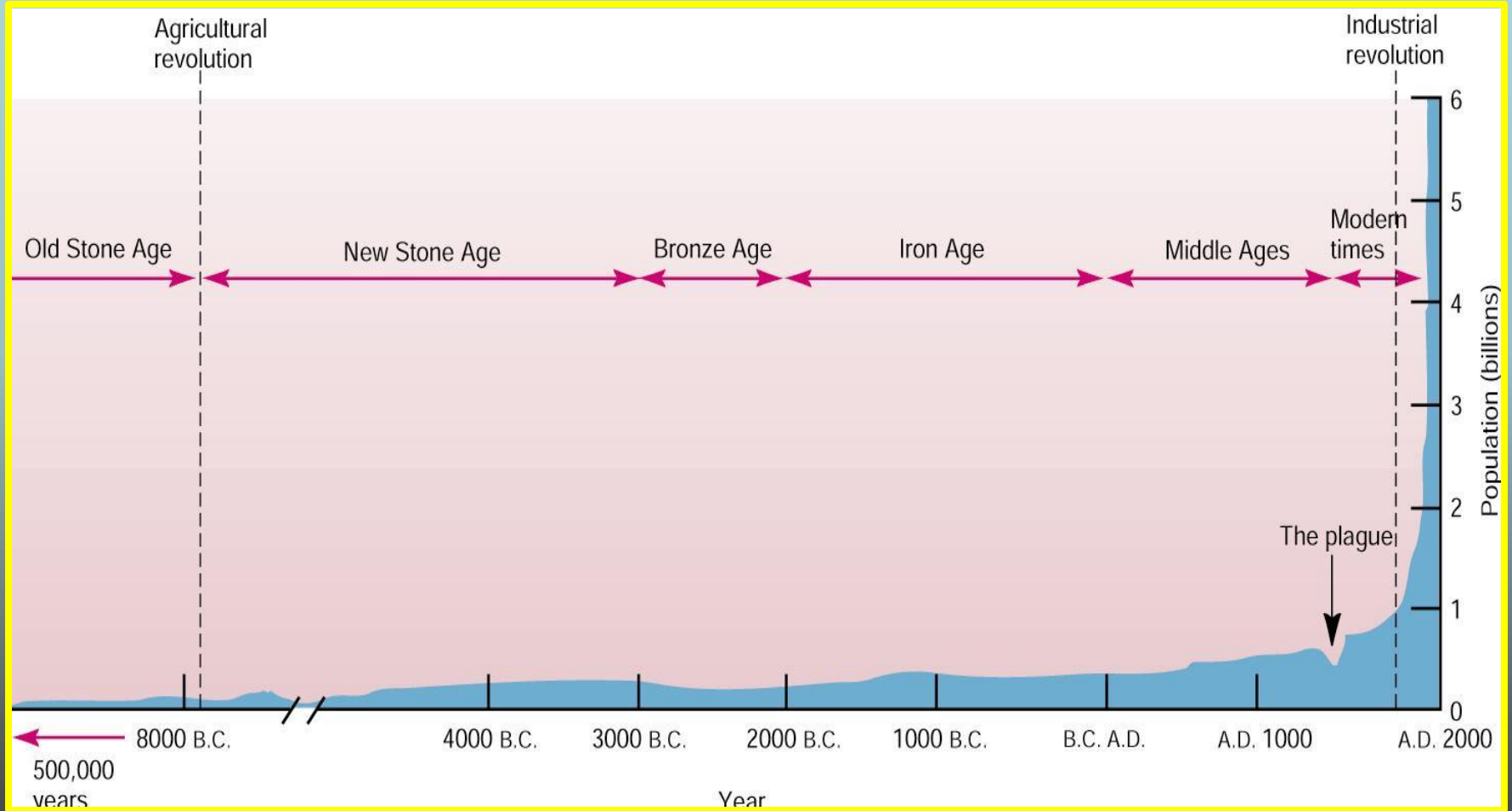


Natural Solutions for Tackling Health Inequalities: Realising the Opportunity



Professor Michael H. Depledge DSc.

Human Population History



The way we were.....



The way we are: living without nature.



Four key behaviours.....

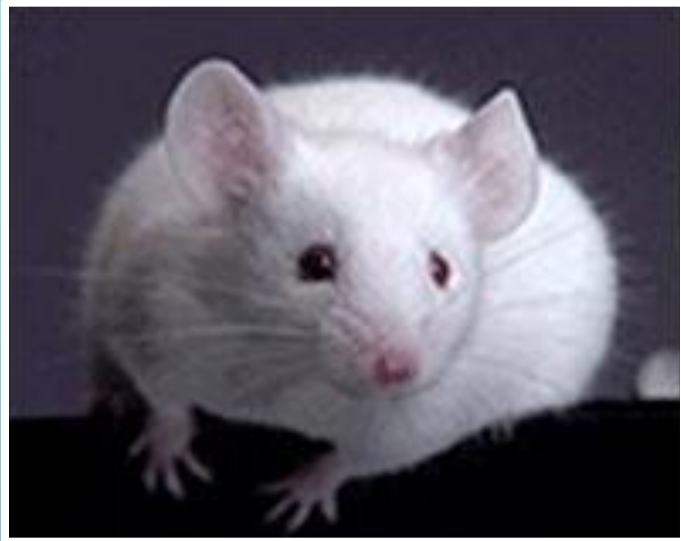


What's missing from our lives?

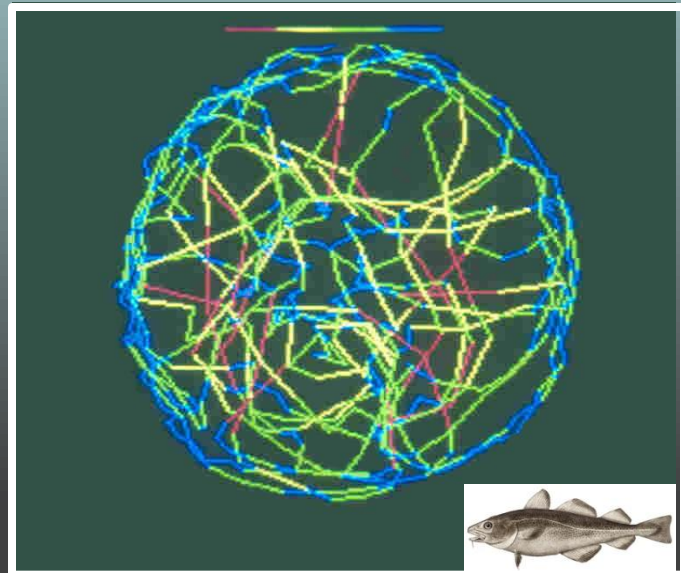


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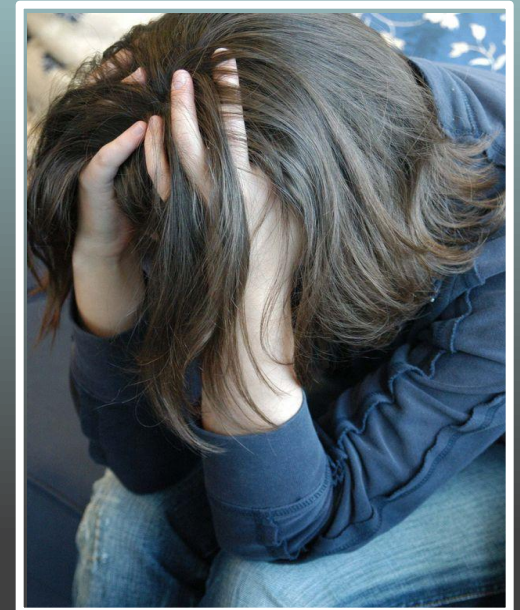
Responses to isolation from Nature?



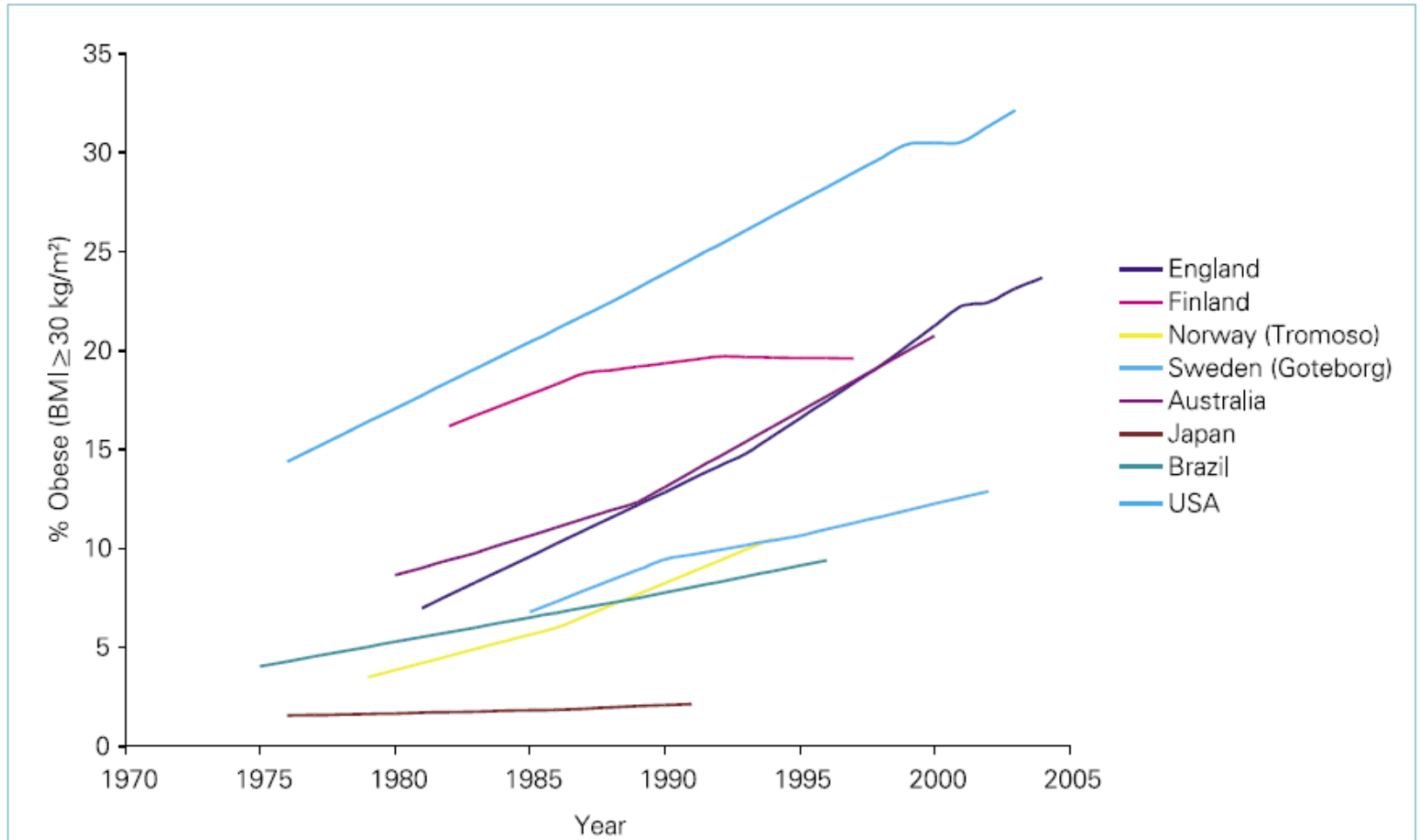
*Excessive
Feeding*



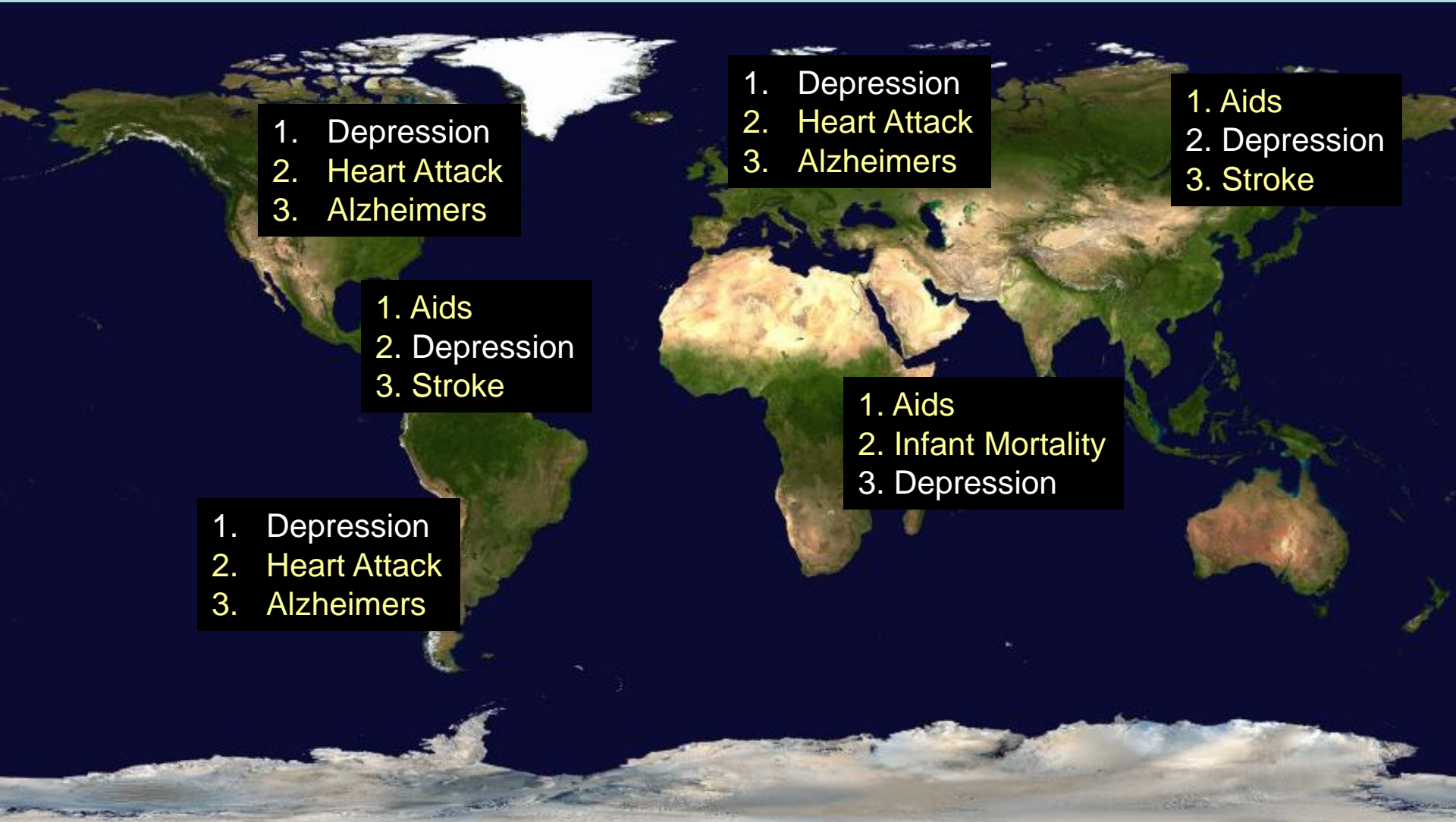
*Behavioural
abnormalities*



Trends in adult prevalence of obesity



Disease patterns by 2030

- 
1. Depression
 2. Heart Attack
 3. Alzheimers

1. Depression
2. Heart Attack
3. Alzheimers

1. Aids
2. Depression
3. Stroke

1. Aids
2. Depression
3. Stroke

1. Aids
2. Infant Mortality
3. Depression

1. Depression
2. Heart Attack
3. Alzheimers

What can the outdoors do for you?



- Increased energy use (standing, walking, running, etc.).
- Mental stimulation (reduced risk of psychiatric disorders, improved sense of wellbeing).
- Long term motivation and beneficial habits.
- Increased social cohesion.

EC – HEPA (Health Enhancing Physical Activity)

- A reduced risk of cardiovascular disease.
- Prevention and/or delay of the development of arterial hypertension, and improved control of arterial blood pressure in individuals who suffer from high blood pressure.
- Good cardio-pulmonary function.
- Maintained metabolic functions and low incidence of type 2 diabetes.
- Increased fat utilisation which can help to control weight, lowering the risk of obesity.
- A lowered risk of certain cancers, such as breast, prostate and colon cancer.
- Improved mineralization of bones in young ages, contributing to the prevention of osteoporosis and fractures in older ages.
- Improved digestion and regulation of the intestinal rhythm.
- Maintenance and improvement in muscular strength and endurance, resulting in an increase in functional capacity to carry out activities of daily living.
- Maintained motor functions including strength and balance.
- Maintained cognitive functions and lowered risk of depression and dementia.
- Lower stress levels and associated improved sleep quality.
- Improved self-image and self-esteem and increased enthusiasm and optimism.
- Decreased absenteeism (sick leave) from work.
- In very old adults, a lower risk of falling and prevention or delaying of chronic illnesses associated with ageing.



What is the Best Dose of Nature and Green Exercise for Improving Mental Health? A Multi-Study Analysis

JO BARTON AND JULES PRETTY*

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Received October 21, 2009. Revised manuscript received
March 12, 2010. Accepted March 15, 2010.

diseases of later life (7). Mental health disorders are now known to affect most people at some point in their lives, with 16% of the general population affected at any given time (8, 9). As aging populations will put additional pressure on health services, it is becoming increasingly urgent that all sectors of the population undertake and sustain healthy behaviors as early in life as possible (10).

Evidence shows that exposure to natural places can lead to positive mental health outcomes, whether a view of nature from a window, being within natural places, or exercising in these environments (11–13). At the population level, there are associations between health and proximity to greenspaces (14). Thus, green space is important for mental health and regular engagement is linked with longevity and decreased risk of mental ill-health (15). Yet as more than half of the world's population now live in urban settlements, daily environmental contact is becoming rarer (16), suggesting the growing importance of access to local greenspace for

Journal of Environmental Psychology 30 (2010) 159–168



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Contents lists available at ScienceDirect

Journal of Environmental Psychology

journal homepage: www.elsevier.com/locate/jep



Vitalizing effects of being outdoors and in nature

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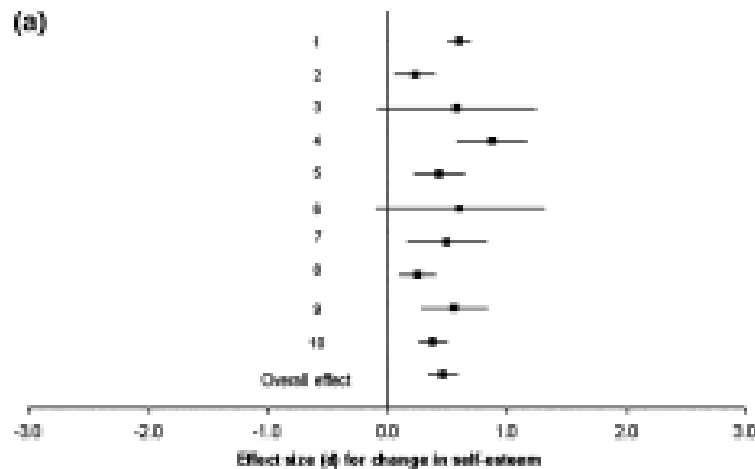
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^e Universität Hamburg, Fachbereich Psychologie, Pädagogische Psychologie und Motivation, Von-Melle-Park 5, D-20146 Hamburg, Deutschland

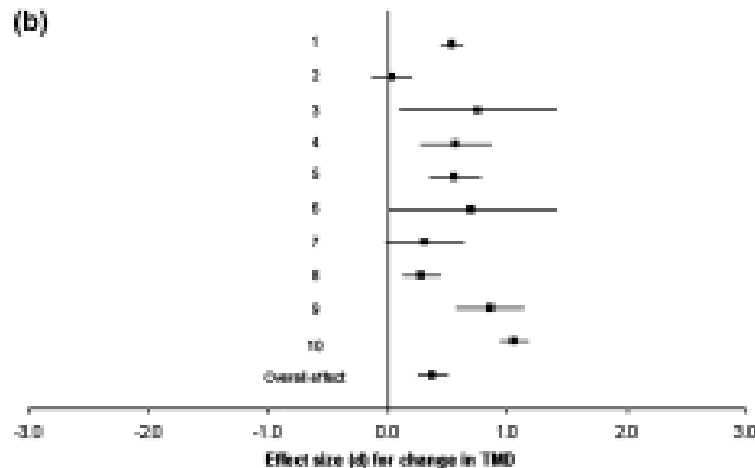


Meta-analysis of studies showing effect size

Self esteem



Total Mood Disturbance



Cues and Clues from Nature

- seeing
- hearing
- smelling
- touching
- tasting
- unknown knowns



Mechanisms

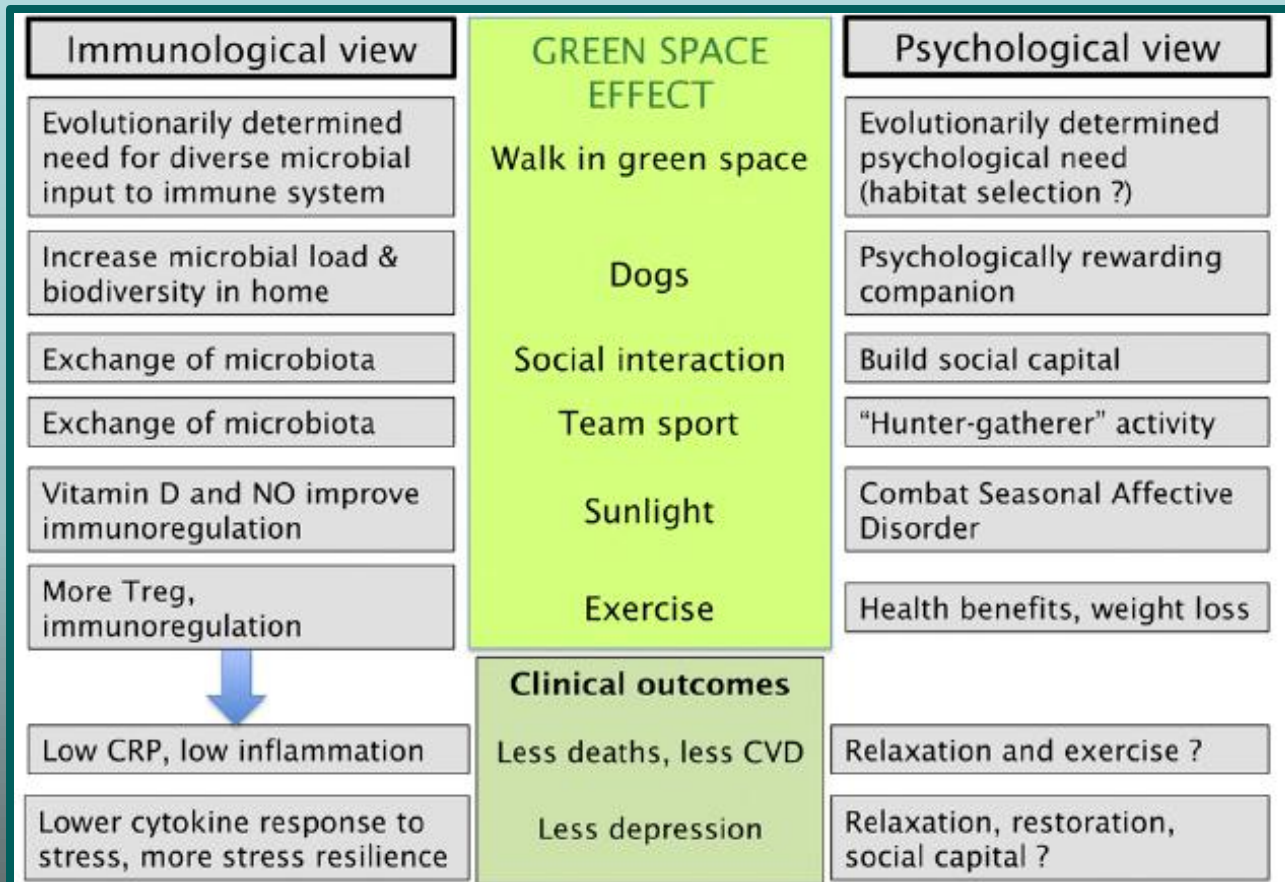


Fig. 4. Immunological and psychological explanations for the health benefits derived from contact with the natural environment. (NO, nitric oxide). There are many studies of exposures during the perinatal period that point to the immunological mechanisms, whereas most studies in adult life have been orientated toward psychological explanations, and have not included investigation of the immunoregulatory aspects.

G. A Rook (2013) www.pnas.org/cgi/doi/10.1073/pnas.1313731110



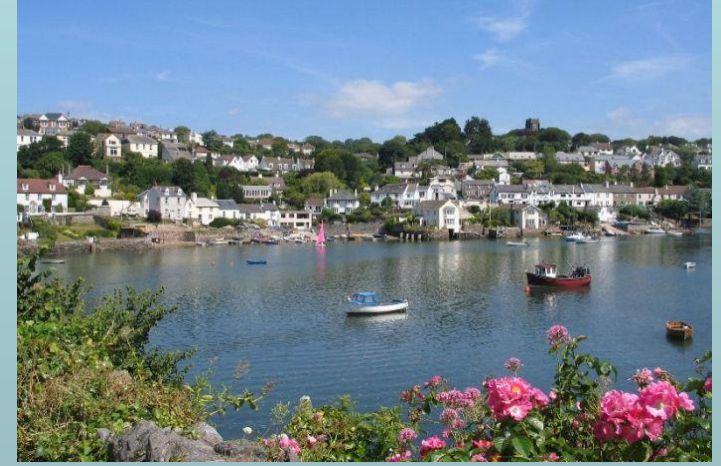
Health Inequalities



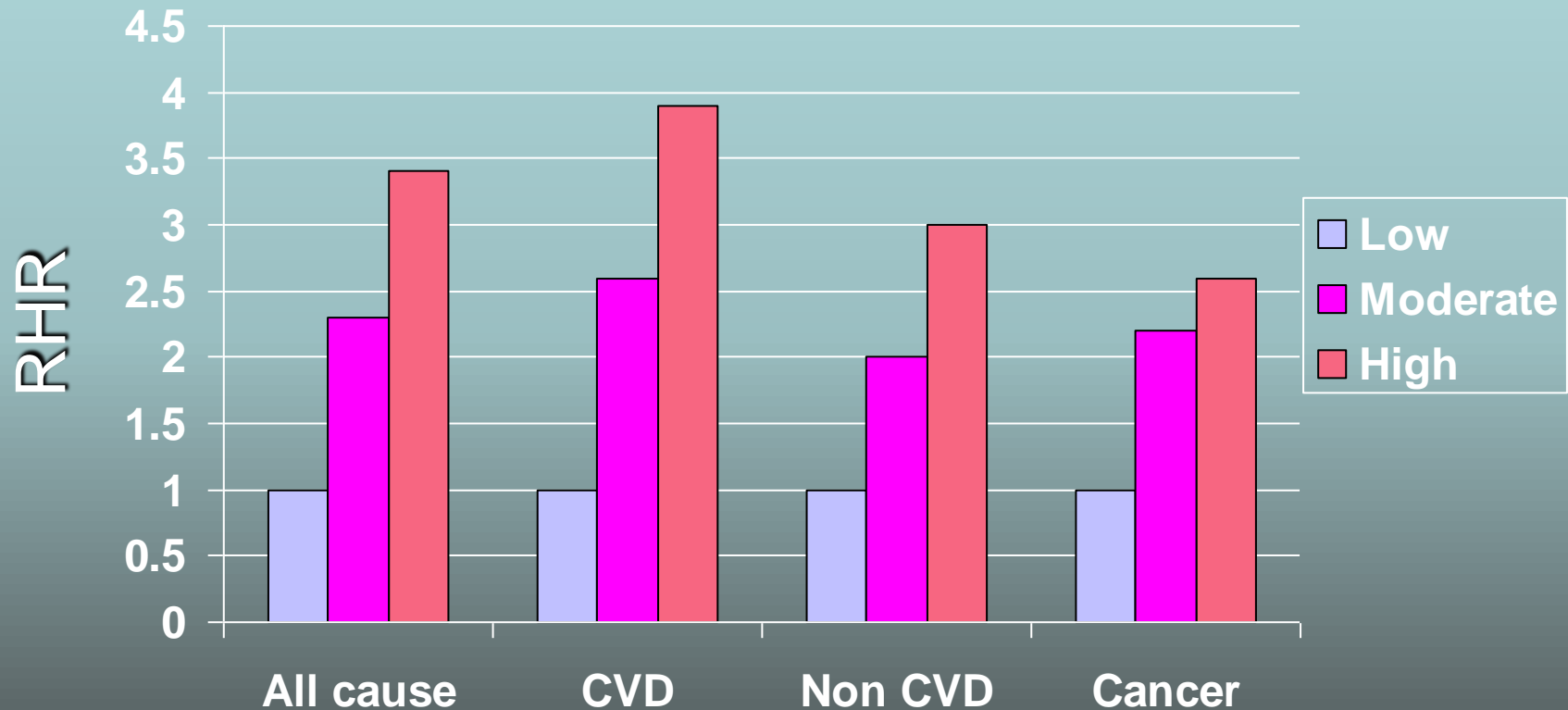
- the Socially Deprived
- the Elderly
- the Young



Unequal access to green and blue space



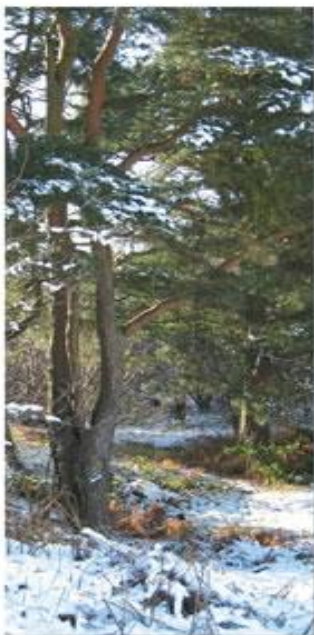
Risk of death - by level of hopelessness



How can we motivate people to adopt sustainable, physically active lifestyles using outdoor natural environments?



Come along to the launch of
**Easterhouse
Green Gym**



Does Participating in Physical Activity in Outdoor Natural Environments Have a Greater Effect on Physical and Mental Wellbeing than Physical Activity Indoors? A Systematic Review

J. Thompson Coon,^{†*} K. Boddy,[†] K. Stein,[†] R. Whear,[†] J. Barton,[§] and M. H. Depledge[†]

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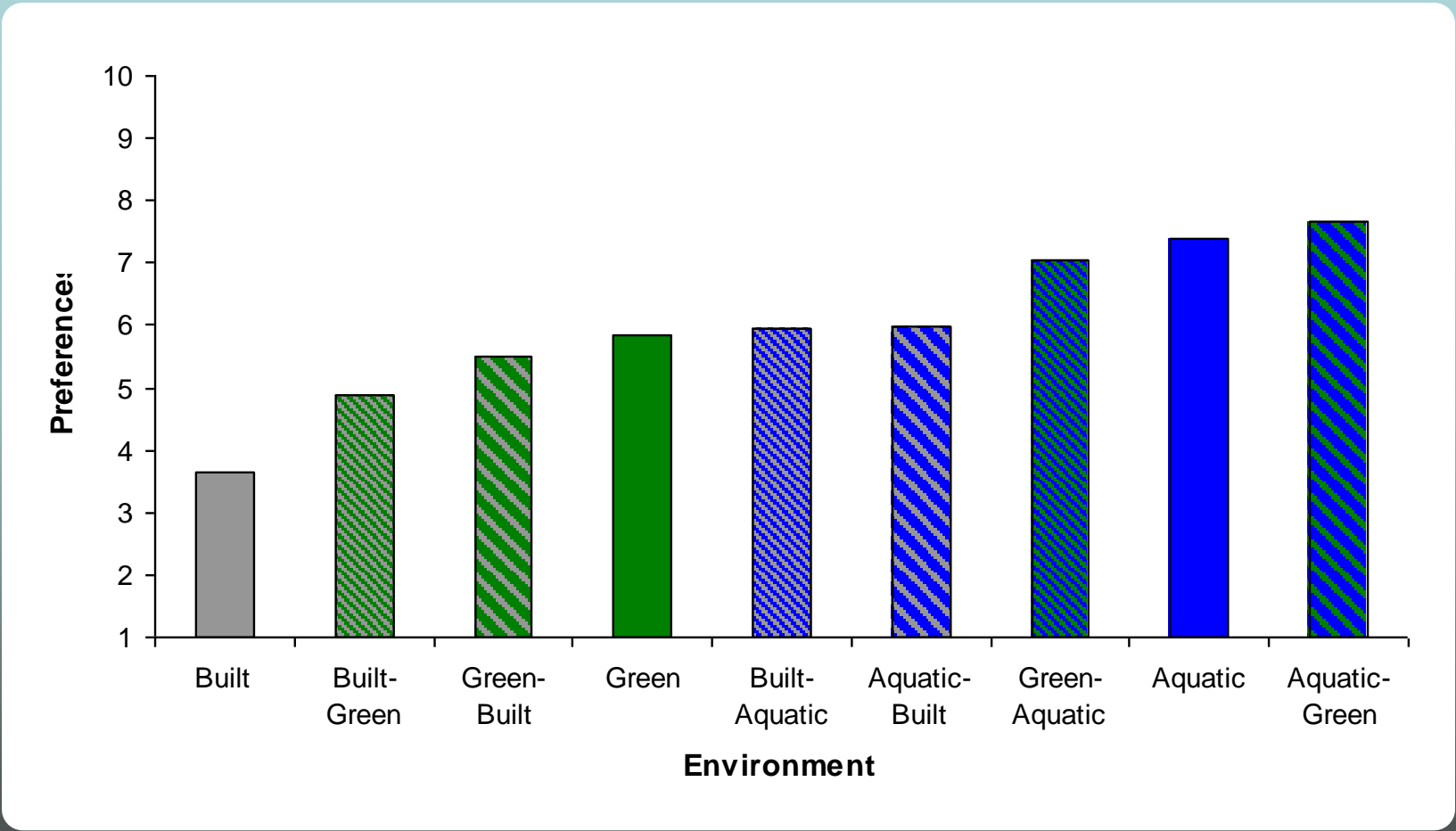
[§]Department of Biological Sciences, University of Essex, Wivenhoe Park, Colchester CO4 3SQ, United Kingdom



Does water make a difference ?



Dose – Response to Aquatic Environments



Bluegym.org.uk



Rockpool rambles



Sailing



Coastal walks

*Health and Wellbeing
from the Environment*



Kayaking



Surfing



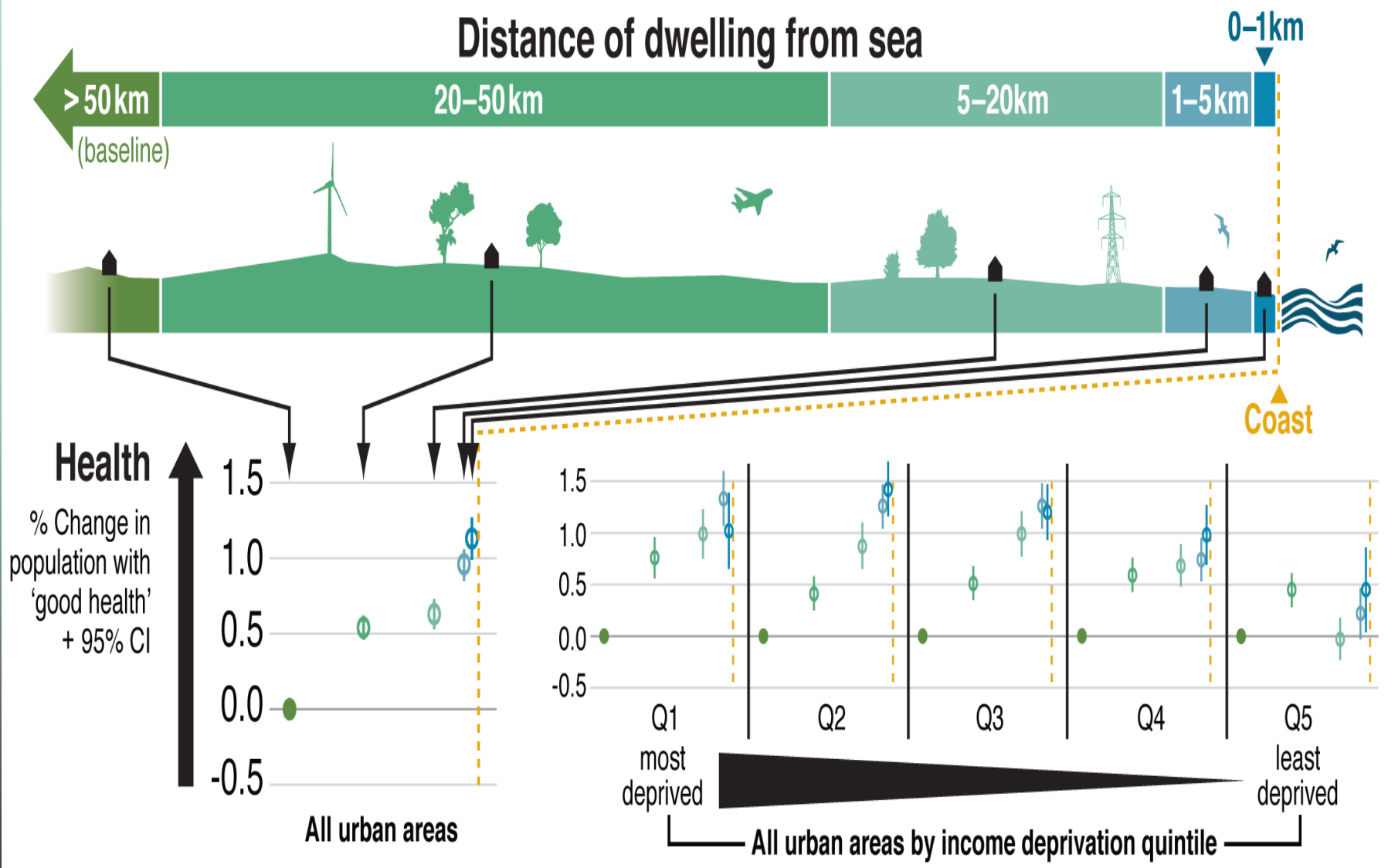
Swimming



Diving



Does living by the sea improve your health and wellbeing?



B. Wheeler, M. White, W. Stahl-Timmins and M.H. Depledge, (2012)
Health and Place, 18, Iss 5, 935-1208

Care Farms



Leisure and Tourism

18 METRO Monday, November 18, 2013

METRO travel travel@ukmetro.co.uk

I'm more in touch with nature now

KNOWLEDGE: Stella Photi is the founder of Wellbeing yes, a service that provides healthy holiday experiences, a fan of yoga, fine wines and the outdoors.

Where did you go on your last holiday? Last month, I combined a wellness conference in Delhi with a stay at the Ananda (www.ananda.com), doubles from £356 (£1), a well-being retreat in Kerala. It specialises in Ayurveda, the ancient form of medicine, as well as yoga.

It also offers active pursuits, so my husband spent five hours a day trekking with a guide while I woke early for two-hour yoga classes. I was blown away by its Ayurveda programme, which is adapted to your individual needs. I felt a completely new woman: entirely de-stressed. I find it hard to switch

off while on holiday because I'm constantly stimulated, so I found my time at Ananda really soothing. One afternoon, my husband and I did a 14km white-water rafting trip in the Ganges. Once we got through the rapids, we jumped into the waves and let them carry us down. It was freezing but so invigorating.

We ended up in Rishikesh, which is a holy city about an hour from Ananda. We had to change out of our wetsuits in a tent in one of the town squares. It was bizarre and very funny, too. The locals were walking around the tent wondering what on Earth we were doing. We also attended a sacred Hindu ceremony, called Aarti, on the banks of the Ganges. It was such a perfect end to the whole experience, watching people being blessed with candles and



MORE TO SEE



New you: Stella Photi at the Ananda in India. Uffizi Gallery, Florence

Dr Gray's Walking Cure

Muir Gray MD



Walking thoughts.....



Biodiversity

Litter/Pollution

Climate change

Sustainability

Improved wellbeing

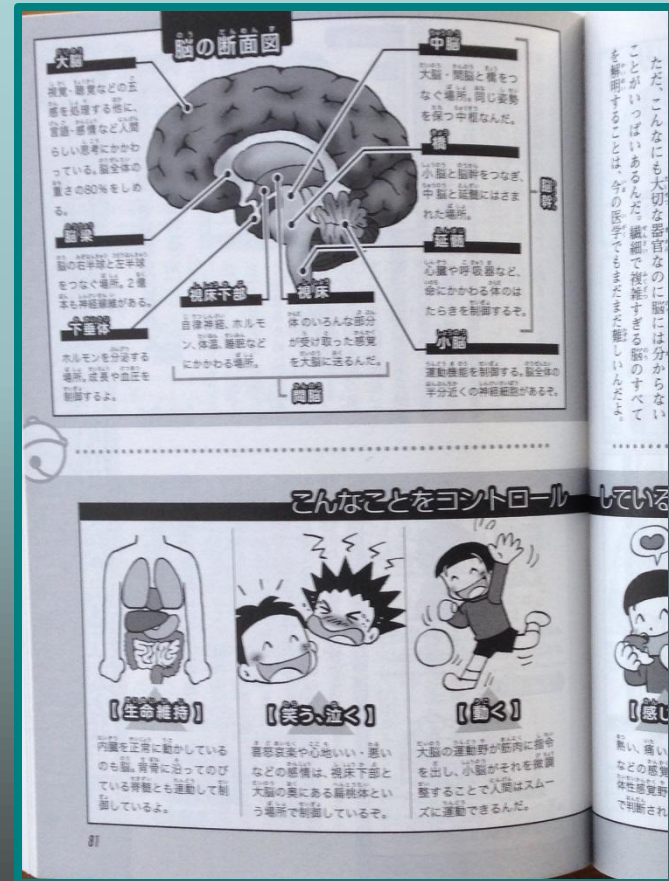
Happiness

Better Health

Greater Fitness



Communicating in an appropriate way....



PROJECT WILD THING

<http://projectwildthing.com>





INHABITAT

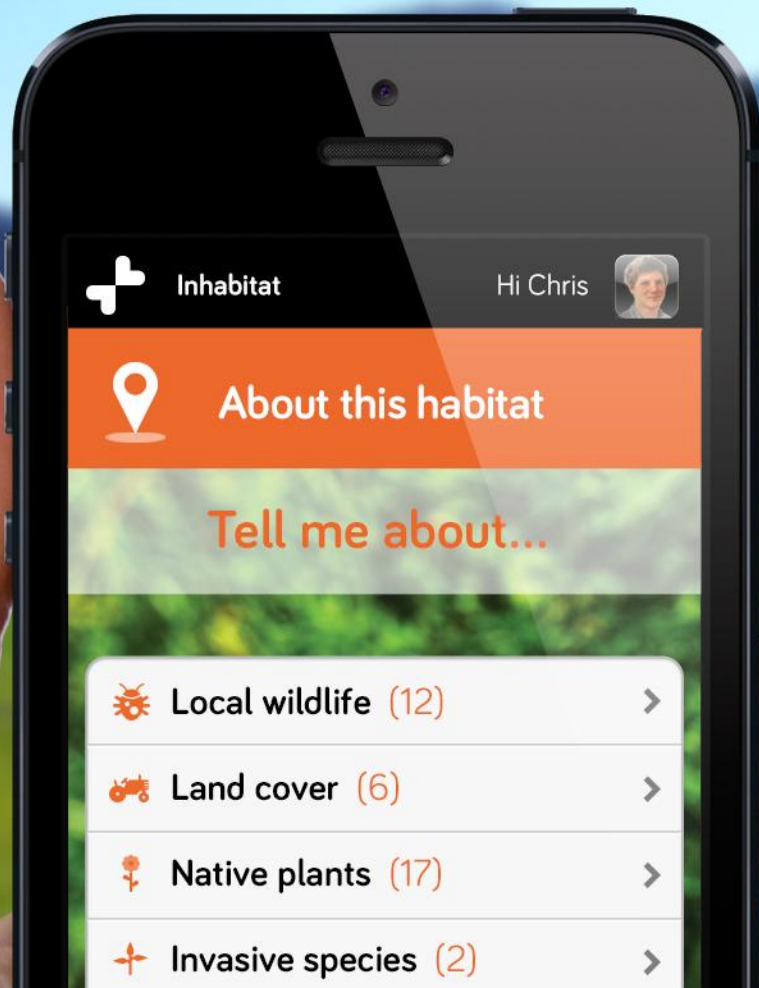


**People engaging with
the environment.**



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Points
Earned



Using bespoke online and digital tools to capture participant reported data on the state of the environment and personal health and wellbeing



Participant benefits



Learning opportunities

Increased knowledge of local biodiversity and of the organisations working to protect the environment and improve health

Greater awareness of the links between our environment and our health

Awareness of potential health gains

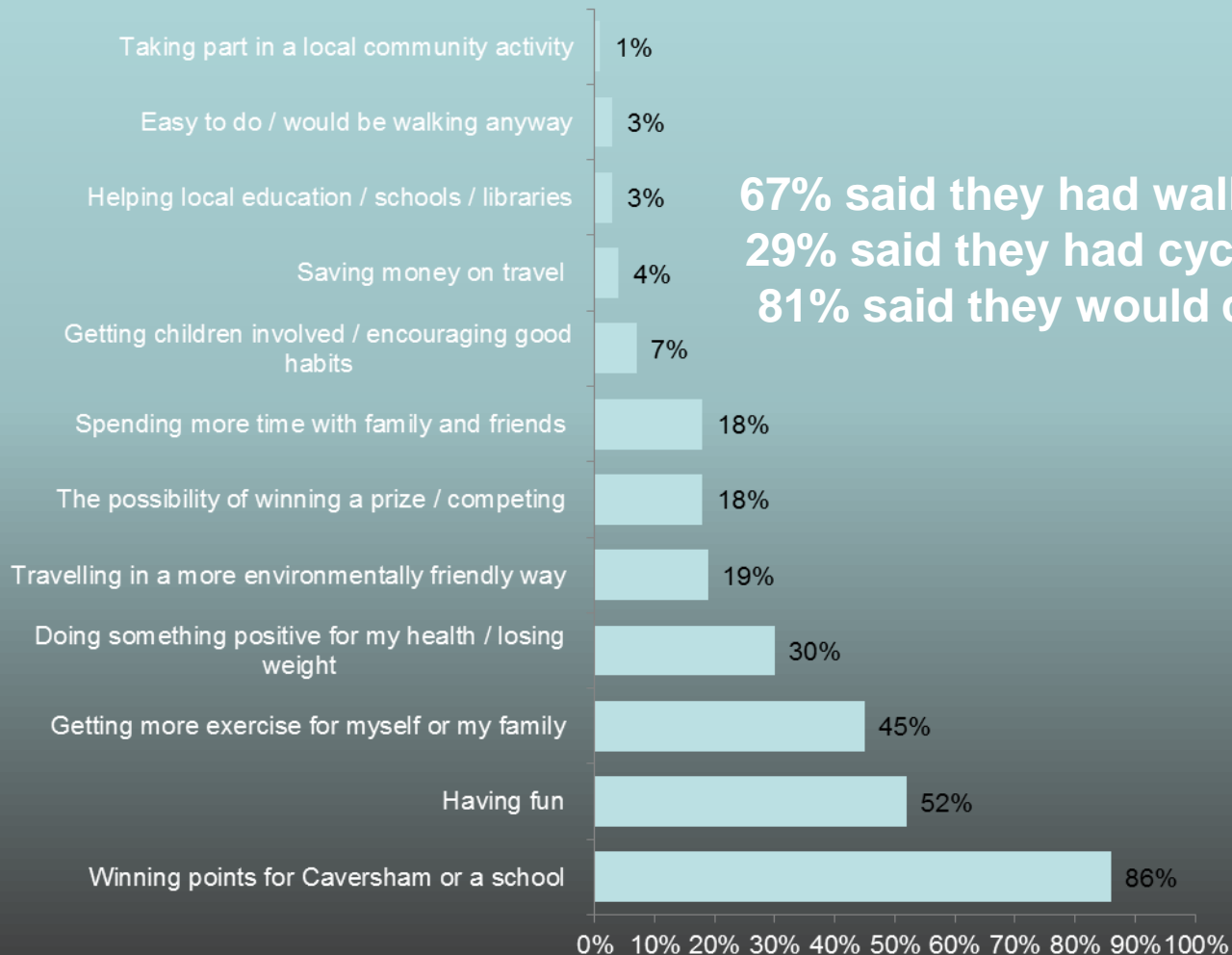
Tackling Health Inequalities through Schools: Beat the Street

- 33% of children's physical activity is through walking or cycling to school
- Simultaneous Global Walk to School competition
- Uses RFID technology to record walks
- Rewards children using points and leader boards
- All schools managed to raise money for charity





Reasons to take part in Beat the Street



**67% said they had walked more
29% said they had cycled more
81% said they would continue**

The Jamaica Bay Project

Mayor Bloomberg And Secretary Jewell Announce Agreement On New **Science And Resilience Institute** As Part Of Cooperative Management Of 10,000 Acres Of City, Federal Parks In And Around Jamaica Bay.



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Environment & Human Health

Reconciling urban lifestyles with natural needs.





Progress so far.....

- The overall proportion of the English population that engages in three or four unhealthy behaviours has declined significantly, from around 33 per cent in 2003, to 25 per cent in 2008.
- These reductions have been seen mainly among those in higher socio-economic and educational groups: people with no qualifications were more than five times as likely as those with higher education to engage in all four poor behaviours in 2008, compared with only three times as likely in 2003.
- The health of the overall population will improve as a result of the decline in these behaviours, but the poorest and those with least education will benefit least, leading to widening inequalities and avoidable pressure on the NHS.

There is no wealth but life.

John Ruskin
1819 - 1900



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