

Physical activity and the environment

Review Three:

Natural Environment

NICE guideline PH8 (published January 2008) has been updated and replaced by NG90.

New recommendations have been added on strategies, policies and plans to increase physical activity in the local environment (1.1.1 to 1.1.3); active travel (1.2.1 to 1.2.4 and 1.2.6 to 1.2.9); public open spaces (1.3.1 to 1.3.3). NICE has deleted some recommendations from the 2008 guideline because the evidence has been reviewed and the recommendations have been updated.

This evidence review is relevant to the updated guideline.

See the [guideline](#) for more details.

Executive Summary

This report examines the evidence for the effectiveness of interventions to the natural environment in increasing physical activity.

The natural environment includes urban and country greenways and parks, water and wetlands, beaches, woodlands, remnant/vacant land, green belts, green corridors, canals, riverbanks, linear green space, tree belts/forests, scenic and historic sites, cliff tops and coast-lines.

Studies were included in the review if they assessed the effect of an intervention that involved a physical modification to the natural environment. This included studies that aimed to change an individual aspect or a set of characteristics of the natural environment, either by landscaping, scenic beautification, renovation, preservation or conservation and/or provision of specific facilities for physical activity (e.g. path, trail, green space, park) within a natural area.

Only intervention study designs were included, studies that examined the association (correlations) between physical activity and the natural environment were excluded.

The outcome of the intervention had to include a measure of physical activity behaviour or use (including walking/ cycling/ pedestrian counts). However, in the absence of any studies with physical activity as an outcome measure visitor numbers were accepted as a proxy outcome measure. It is recognised that this is a weak measure of the primary outcome of interest.

No intervention studies meeting the inclusion criteria were found from the electronic search strategy, however two post-only studies were identified through an extensive search of grey literature and relevant websites.

These studies covered two main areas:

1. Woodland

There is insufficient evidence to draw any conclusions on the effect of interventions involving changes to the physical environment and design features of woodland areas on physical activity outcomes. There is, however, evidence from one (3-) quality post-only study (Cannock Chase Council et al., 2005) to suggest that building creative features along a woodland trail may increase visitor numbers.

2. Coastal

There is insufficient evidence to draw any conclusions on the effect of interventions involving changes to the physical environment and design features of coastal areas on physical activity outcomes. There is, however, evidence from one (3-) quality post-only study (Peacock et al., 2006) to suggest that improving a coastal path may increase frequency and duration of visits.

Included case studies

Cannock Chase Council, Forestry Commission and Cannock Chase Primary Care Trust. (2005) Route to Health. Birches Valley Forest Centre, Cannock Chase.

Peacock, J., Hine, R. and Pretty, J. (2006) The health benefits of environmental improvements to a circular route at Easington Coastal Path. Short summary of the key findings for the Environment Agency and Durham Heritage Coast. Centre for Environment and Society, University of Essex.