

Review confirms benefits of outdoor exercise

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A systematic review carried out by a team at the Peninsula College of Medicine and Dentistry has analysed existing studies and concluded that there are benefits to mental and physical well-being from taking exercise in the natural environment. Their findings are published in the leading research journal *Environmental Science and Technology* today, 4th February 2011.

The research team, supported by the NIHR Peninsula Collaboration in Leadership for Applied Health Research and Care (PenCLAHRC, part of the NIHR family of health and research initiatives) in collaboration with the European Centre for the Environment and Human Health (ECEHH), analysed data from a number of sources including 11 randomised and non-randomised control trials incorporating information from 833 adults.

Eligible trials were those that compared the effects of outdoor exercise initiatives with those conducted indoors and which reported at least one physical or mental well-being outcome in adults or children.

The study found that most trials showed an improvement in mental well-being: compared with exercising indoors, exercising in [natural environments](#) was associated with greater feelings of revitalisation, increased energy and positive engagement, together with decreases in tension, confusion, anger and depression. Participants also reported greater enjoyment and satisfaction with outdoor activity and stated that they were more likely to repeat the activity at a later date.

However, none of the identified studies measured the effects of [physical activity](#) on physical well-being, or the effect of natural environments on sticking to exercise.

On balance this review has identified some promising effects on self-reported mental well-being immediately following exercise in the natural environment, as opposed to those reported following exercise indoors. This is a first step towards vindicating the positive effects of programmes such as the Green Gym and Blue Gym, and innovative interventions by medical practitioners that include exercise outdoors as part of holistic treatments for those suffering from depression and similar psychological ailments.

At present research analysts are working with a paucity of high quality evidence, and one significant outcome from this study is the urgent need for there to be further research in this area. Large, well-designed longer-term trials in populations who might benefit most from the potential advantages of outdoor exercise are needed to fully analyse the effects of outdoor exercise on mental and physical well-being. Studies are also required that measure the influence of such effects on the sustainability of physical activity.

Dr. Jo Thompson-Coon, PenCLAHRC Research Fellow, commented: "The hypothesis that there are added beneficial effects to be gained from exercising in the natural environment is very appealing and has generated considerable interest. By using the data currently available to us we have added strength to the link between mental and physical well-being and outdoor exercise, but further research and longer, tailor-made and focused trials are needed to better understand this link."

The senior author of the study, Professor Michael Depledge, Chair of Environment and Human Health at the ECEHH, added: "Some 75 per cent of the European population now live in urban environments, so that

increasing efforts need to be made to re-connect people with nature via programmes such as the Green Gym and Blue Gym. Our research, which brings together data from a wide variety of sources, adds significant weight to the case for spending more time in the natural environment as members of the public and their clinicians fight to counteract the negative outcomes of modern living, such as obesity and depression. We look forward to conducting the further research and trials required to establish the evidence-base for introduction of outdoor activity into general lifestyle to complement therapeutic intervention."

Professor Stuart Logan, Director – Institute of Health Service Research and Director - PenCLAHRC, at the Peninsula College of Medicine & Dentistry, said: "This is just the sort of project that PenCLAHRC is designed to support. It reflects the aim of the National Institute for Health Research in establishing CLAHRCs around the UK – locally identified and undertaken research that translates to improved health and well-being and that both benefits the local community and contributes to the production of research evidence. This is an exciting project with immense potential."

Provided by The Peninsula College of Medicine and Dentistry

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