

# Reduce energy bill with stair climbing

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A team of researchers from the University of Birmingham's School of Sport and Exercise Sciences is embarking on a stair climbing challenge to decrease the energy expenditure of businesses and to improve the health and wellbeing of workforces.

Funded by the British Medical Research Council the researchers are working in conjunction with local Primary Care Trusts and obesity action teams to encourage stair climbing in the workplace in response to the increasing problem of obesity and lack of physical activity amongst the British population.

Obesity is a growing problem in the UK and the research team believes part of the solution to this health problem – increased use of stairs in the work place – could also help to save companies money. They are currently recruiting buildings and businesses to participate in the project which will test the best way to encourage employees to choose the stairs instead of the lift. Lifts account for up to 8% of a [building's](#) energy costs, so using the stairs as an alternative to lifts will directly reduce the cost of companies' energy bills.

Dr. Frank Eves, a Reader in Lifestyle Physical Activity from the University of Birmingham's School of Sport and Exercise Sciences commented: "It is a surprising fact that stair climbing requires more energy per minute than jogging and the same as football. Regular use of the stairs can help to prevent weight gain as well as improving cardiovascular fitness and cholesterol levels of employees.

“Additionally, increased stair climbing will reduce the heating costs of the building. Humans work at only 20% efficiency when climbing stairs and each calorie expended when climbing produces four calories of heat. The net outcome is that an employee climbing stairs will generate three times the heat of a lift for the same journey.”

The first stage of the project will involve auditing the use of stairs and lifts in a number of different buildings. Stair and lift usage will be monitored continuously to ascertain the flow of pedestrians within the buildings.

The second stage will introduce interventions to encourage workers to climb the stairs instead of riding the lift. Posters will be positioned in the buildings that provide information on the health benefits of stair climbing to encourage individuals to choose the stairs.

Dr. Eves adds: “As stair climbing requires no equipment or sporting ability and is free, it is an attractive physical activity for individuals who might not feel that sport is for them. Promoting the accumulation of [physical activity](#) as part of daily living is a current goal of the Department of Health.”

Worksite buildings are currently being sought to participate in this project. As well as benefitting an individual’s fitness levels, taking the stairs can increase a building’s efficiency, reducing a building’s energy cost.

Provided by University of Birmingham

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