

## PEOPLE WITH ASTHMA FEEL BETTER AFTER PERFORMING BREATHING EXERCISES

A randomised trial of adding the Papworth technique (breathing and relaxation exercises designed in the 1960s to help people who hyperventilate) to usual asthma care in patients with mild asthma seems to give significant benefits.

A total of 85 patients were randomised to a group receiving five sessions of treatment with the Papworth method or to a control group receiving usual medical care. After treatment those in the actively managed group had a statistically significant improvement in their symptoms, anxiety and depression scores, and their responses to the St George's Respiratory Symptoms Questionnaire (21.8 vs 32.8 in the control group,  $p=0.001$ ). These benefits were maintained at 12 months follow-up (24.9 vs 33.5,  $p=0.007$ ).



Commenting on the study, Dr Mike Thomas, Senior Research Fellow at Asthma UK said, "It is also consistent with other studies from Australia and the UK which show that breathing exercises can help to reduce the need for reliever medication and can improve the quality of life of people with asthma. It is, however, vital that people with asthma continue to take their prescribed medication alongside any additional breathing training."

### ACTION

The Papworth method improves respiratory symptoms, dysfunctional breathing and adverse mood compared with usual care of asthma. Further controlled trials are needed.

Holloway EA *et al.* *Thorax* 2007; **62**: 1039-42.

We previously explored how the double-blind randomised controlled trial (RCT) design was developed to reduce the extent to which patients' beliefs and researchers' behaviour affect research findings. This article will help you to understand a further source of bias: differences between groups at baseline.

Jane Upton

Research Project Manager, Education for Health

### EXAMPLE

Imagine an RCT in which subjects were allocated either to eat lots of chocolate plus their normal meals (the intervention) or just their normal meals (the control). If you love chocolate and the abstract of the paper stated that subjects who frequently ate chocolate lost significantly more weight than the control group, you might be tempted to accept this finding at face value.

### HOW MIGHT THE STUDY BE BIASED?

To assess if the abstract findings are truthful and correct you need to read the full article. In this example, you might have found from the table of baseline subject characteristics that the intervention group did more exercise than the control group. As this would affect weight loss, it is reasonable to conclude that the findings were biased by the differences between groups at baseline rather than frequent chocolate intake being an effective weight loss programme!

### HOW MIGHT THIS TYPE OF BIAS HAVE BEEN AVOIDED?

- By ensuring that randomisation is properly conducted. This will increase the likelihood of baseline subject characteristics being evenly divided between the intervention and control groups.
- By identifying subject characteristics that might affect the findings and ensuring that these are equally divided between the intervention and control groups. Subjects could have been categorised by exercise level and then randomised so that an equal number of exercisers and non-exercisers were in the intervention and control groups. This is called 'stratification' and is particularly useful in small RCTs.
- Lastly, the data can be statistically analysed to adjust for baseline differences between groups. This should be clearly stated in the analysis of results section.



Evidence in Practice compiled by:  
Jeremy Bray  
Managing editor of *BJPCN Respiratory*