



Multicentre trials on specialised exercise training and rehabilitation are useful in patients with pulmonary hypertension



SHAREABLE PDF

Ekkehard Grünig¹, Nicola Benjamin¹, Christina A. Eichstaedt¹ and Andrew J. Peacock² on behalf of the ERS task force on pulmonary hypertension rehabilitation co-authors

Affiliations: ¹Centre for Pulmonary Hypertension, Thoraxklinik at the University Hospital Heidelberg, Translational Lung Research Center Heidelberg (TLRC), German Center for Lung Research (DZL), Heidelberg, Germany. ²Scottish Pulmonary Vascular Unit, Golden Jubilee National Hospital, Glasgow, UK.

Correspondence: Ekkehard Grünig, Centre for Pulmonary Hypertension, Thoraxklinik at Heidelberg University Hospital, Röntgenstraße 1, 69126 Heidelberg, Germany. E-mail: ekkehard.gruenig@med.uni-heidelberg.de

 @ERSpublications

Multicentre trials on specialised exercise training and rehabilitation in patients with pulmonary hypertension are needed to provide further evidence on its haemodynamic effects and to show implementation in different healthcare systems is possible. <http://bit.ly/2L4Mrgt>

Cite this article as: Grünig E, Benjamin N, Eichstaedt CA, *et al.* Multicentre trials on specialised exercise training and rehabilitation are useful in patients with pulmonary hypertension. *Eur Respir J* 2019; 54: 1901631 [<https://doi.org/10.1183/13993003.01631-2019>].

This single-page version can be shared freely online.

From the authors:

We would like to thank L. Bertoletti and co-workers for their important comments. We fully agree that more multicentre data, especially on the haemodynamic effects of rehabilitation programmes, are needed and might be helpful for re-evaluating the current level of evidence and indication of exercise training in pulmonary hypertension. A new grading of evidence and recommendation of treatment was not the purpose of the task force statement and hence not alluded to. This has to be done through authorised committees. We also agree with L. Bertoletti and co-workers' excellent description of the methodological difficulties of measuring the efficacy and long-term outcome of exercise training in pulmonary hypertension. Therefore, the new initiative for a prospective, randomised trial using new methods for randomisation is highly welcomed and should be supported. However, while Zelen's design [1], which is implemented in the new study, offers many advantages, it also comes with challenging problems and cannot be generally recommended for rehabilitation trials. The design has to be adapted to comply with the new European Union regulations on data protection (patients have to consent to serve as a control group). Furthermore, the Zelen design has difficulties addressing performance bias, which was pointed out as one of the two main methodological issues in studies on exercise training in pulmonary hypertension by a recent Cochrane review [2]. Specifically, performance bias may not be excluded, as control patients will not receive the amount of care which patients receive in a structured exercise training programme. Reporting bias, the second main shortcoming highlighted by the Cochrane review, should always be avoided, irrespective of the chosen study design.