exercise tolerance compared with aerobic training alone. (Evidence level 1+)

The GDG puts forward a number of arguments to justify recommending LRT, despite the evidence level being 1+:

- Lower limb weakness is common in COPD and is a poor prognostic indicator.
- LRT has other benefits, such as reducing falls in older people in general.
- LRT in combination with aerobic training results in greater improvements in peripheral muscle strength than aerobic training alone.

The claim that LRT reduces falls in older people is not supported by a citation, and our understanding is that this link remains equivocal. The other mitigating claims are not unique to LRT (see below).

The evidence statement relating to IMT is very similar to the statement for LRT, but the resulting recommendation is entirely different:

- IMT using threshold loading devices or normocapnoic hyperpnoea does not appear to augment the beneficial effects of general exercise training in patients with COPD. (Evidence level 1+)

- IMT is not recommended as a routine adjunct to pulmonary rehabilitation.

To our eyes, based upon the evidence statements, the differing recommendations are inconsistent, particularly as the mitigating factors used by the GDG to justify its recommendation of LRT also hold true for IMT:

- Inspiratory muscle weakness is also common in COPD and is an independent determinant of survival.2
- IMT in combination with exercise training yields larger improvements in inspiratory muscles strength and endurance than aerobic training alone.3

Perhaps most importantly, unlike LRT, standalone IMT is an evidence-based intervention in its own right, and is supported by systematic reviews and meta-analyses.3 4 Established benefits include, “inspiratory muscle strength and endurance, functional exercise capacity, dyspnoea and quality of life” 5.

Given the highly influential nature of these guidelines, and their likely adoption as the ‘de facto’ standard of care, disparities in the interpretation of the evidence base must be justified carefully; failure to do so creates an impression of bias.

Alison K McConnell,1 Rik Gosselink2,3

1Centre for Sports Medicine & Human Performance, Brunel University, London, UK

British Thoracic Society guideline on pulmonary rehabilitation in adults: does objectivity have a sliding scale?

We congratulate the Guideline Development Group (GDG) on the publication of their new pulmonary rehabilitation guideline.1 However, we are concerned by the contrasting recommendations for limb resistance training (LRT), which is recommended, and for inspiratory muscle training (IMT), which is not. Both interventions have identical levels of evidence (1+) and similar evidence statements.

The evidence statement in relation to LRT is as follows:

In patients with COPD, resistance training in combination with aerobic training does not lead to additional benefits to health-related quality of life, dyspnoea or

**Thorax** April 2014 Vol 69 No 4
PostScript

2KU Leuven Faculty of Kinesiology and Rehabilitation Sciences, Leuven, Belgium
3Respiratory Rehabilitation and Respiratory Division, University Hospital Leuven, Leuven, Belgium

Correspondence to Professor Alison McConnell, Centre for Sports Medicine & Human Performance, Heinz Wolff Building, Brunel University, Uxbridge UB8 3PH, UK; alison.mcconnell@brunel.ac.uk

Competing interests AKM acknowledges a beneficial interest in an inspiratory muscle training product in the form of a share of license income to the University of Birmingham and Brunel University. She also acts as a consultant to companies manufacturing inspiratory muscle training products, as well as being the author of two books on respiratory muscle training.

Provenance and peer review Not commissioned; internally peer reviewed.

Open Access This is an Open Access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 3.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/3.0/

Received 14 October 2013
Accepted 12 December 2013
Published Online First 9 January 2014

http://dx.doi.org/10.1136/thoraxjnl-2013-204754

doi:10.1136/thoraxjnl-2013-204684

REFERENCES
British Thoracic Society guideline on pulmonary rehabilitation in adults: does objectivity have a sliding scale?

Alison K McConnell and Rik Gosselink

Thorax 2014 69: 387-388 originally published online January 9, 2014
doi: 10.1136/thoraxjnl-2013-204684

Updated information and services can be found at:
http://thorax.bmj.com/content/69/4/387

These include:

References
This article cites 4 articles, 2 of which you can access for free at:
http://thorax.bmj.com/content/69/4/387#BIBL

Open Access
This is an Open Access article distributed in accordance with the Creative Commons Attribution Non Commercial (CC BY-NC 3.0) license, which permits others to distribute, remix, adapt, build upon this work non-commercially, and license their derivative works on different terms, provided the original work is properly cited and the use is non-commercial. See: http://creativecommons.org/licenses/by-nc/3.0/

Email alerting service
Receive free email alerts when new articles cite this article. Sign up in the box at the top right corner of the online article.

Topic Collections
Articles on similar topics can be found in the following collections

Open access (245)

Notes

To request permissions go to:
http://group.bmj.com/group/rights-licensing/permissions

To order reprints go to:
http://journals.bmj.com/cgi/reprintform

To subscribe to BMJ go to:
http://group.bmj.com/subscribe/