

Practical experience-based recommendations for physical therapy in sarcoidosis

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Introduction

Sarcoidosis patients often present with non-specific symptoms, such as reduced exercise capacity and fatigue, disabling symptoms that may have a major influence on daily, social, and professional activities of patients, resulting in a reduced quality of life (QOL; fig. 1).¹⁻⁴ In several interstitial lung diseases (ILD), including sarcoidosis, physical training (PTr) has been shown to improve exercise intolerance, peripheral muscle strength and QOL.^{4,5}

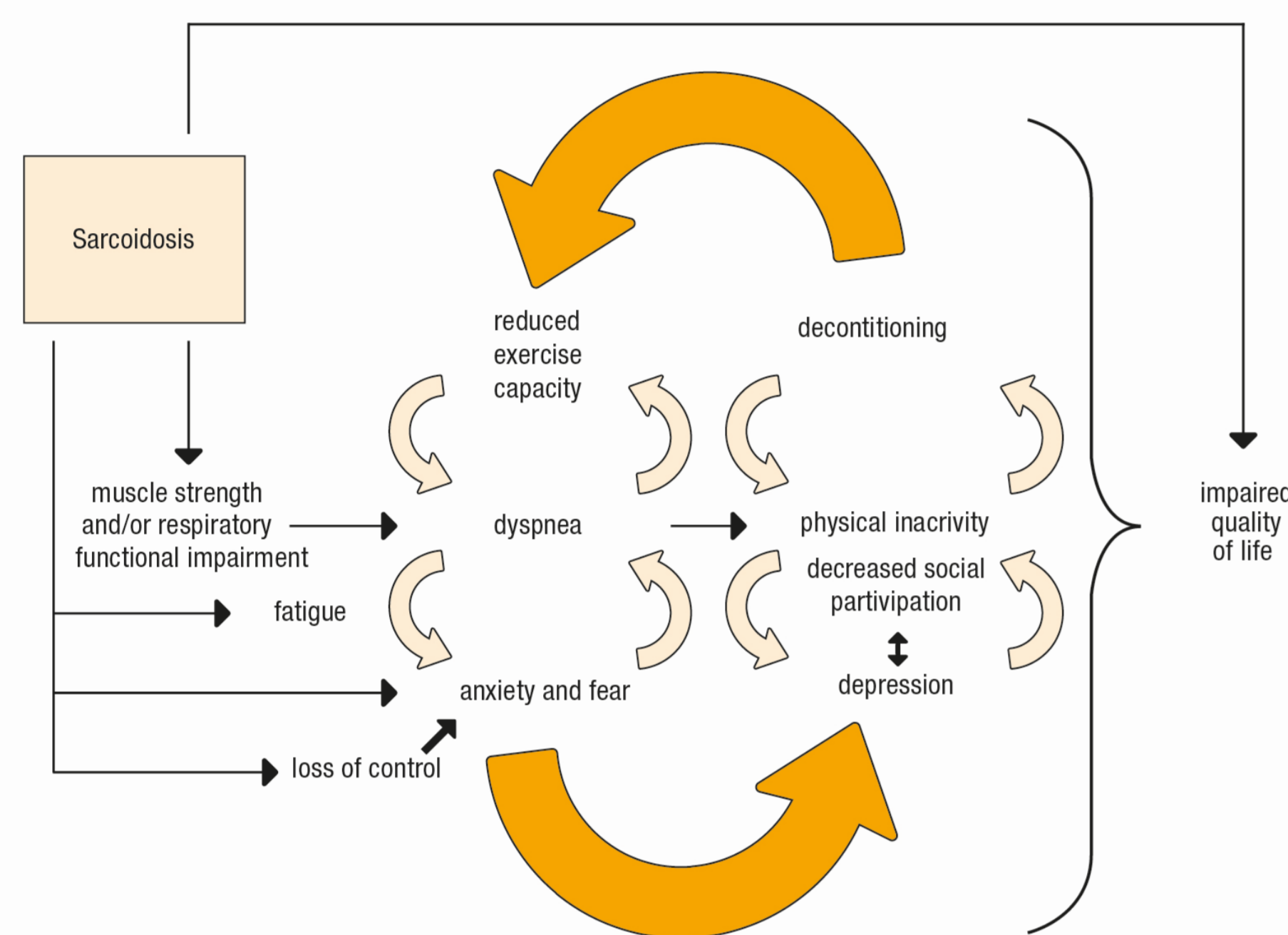


Figure 1. Negative cycle of deconditioning in sarcoidosis (Swigris et al. 2008)⁴

Objective

The aim of this study is to establish practical recommendations for the use of PTr in the management of sarcoidosis patients with various manifestations.

Methods

Physical training (PTr) is defined as the core component of pulmonary rehabilitation (PR) which is comprised of upper and lower extremity strengthening with aerobic and resistance training. Phase I of the design consisted of a systematic literature review to evaluate the evidence for PTr in sarcoidosis. Studies conducted in sarcoidosis were supplemented with data obtained from relevant studies in interstitial lung diseases. In Phase II, data concepts were deconstructed and collated for Phase III, Delphi consensus methodology engaging sarcoidosis experts worldwide.

Results

A systematic literature review yielded studies in PR or PTr in ILD; n=15), predominantly being idiopathic pulmonary fibrosis (IPF). Only 3 studies in sarcoidosis were found suggesting benefit in the areas of exercise capacity, fatigue and QOL.⁶⁻⁸ All studies found that a physical training program improves exercise capacity and muscle strength and reduces fatigue among sarcoidosis patients and should be a first-line therapy for patients suffering from sarcoidosis.

Results

Analysis of the literature review identified 38 recommendation concepts of which 10 were related to indications for PTr, 15 to clinical endpoints in PTr and 3 to general assessment in sarcoidosis. The Delphi survey contained 35 questions on a 10-point Likert scale and 15 concepts for priority ranking. In phase III of the study 165 of the world's leading sarcoidologists of varying specialties were consulted with an electronic survey on PTr in sarcoidosis. Out of the 102 responding physicians those treating ≥25 sarcoidosis patients per year (n=87) were selected. Groups were constructed to compare regional differences (fig.2).

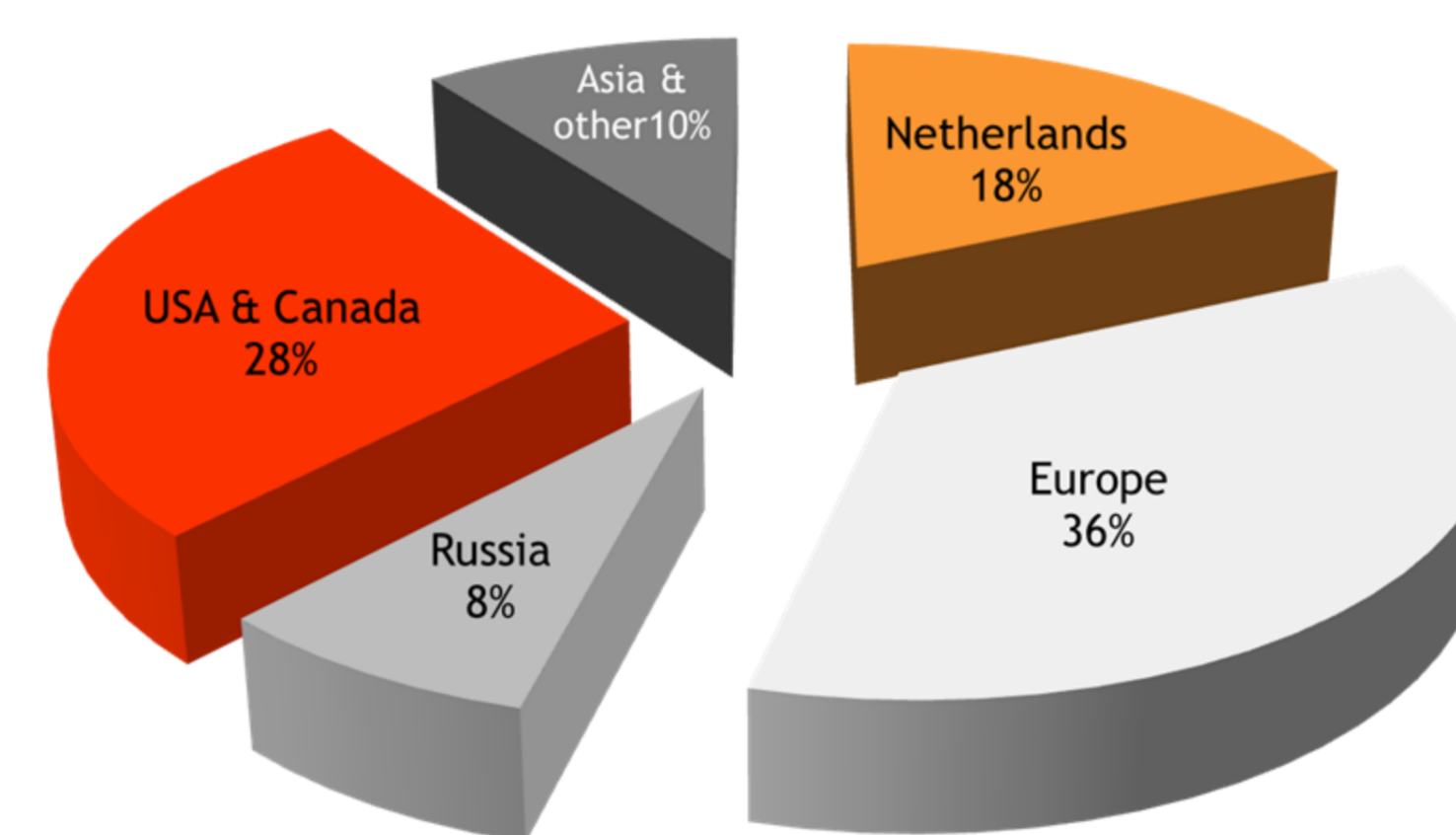


Figure 2. Respondents per region.

The majority considered PTr valuable in patients with sarcoidosis (88% of respondents). Those who were unfamiliar with PTr did not know whether or not sarcoidosis patients would benefit from PTr. PTr for sarcoidosis patients is available in 69% of respondents. Most of the respondents (62%) would refer patients 'regularly, often or always' if they have/would have access to PTr for sarcoidosis. Reimbursement for PTr in sarcoidosis is not everywhere available (see Table 1). Pulmonary involvement and fatigue are the most prominent indications to refer patients to PTr (fig.3). Advised outcome measures evaluating the effect of PTr are fatigue (70%), exercise capacity (52%) and QOL (48%).

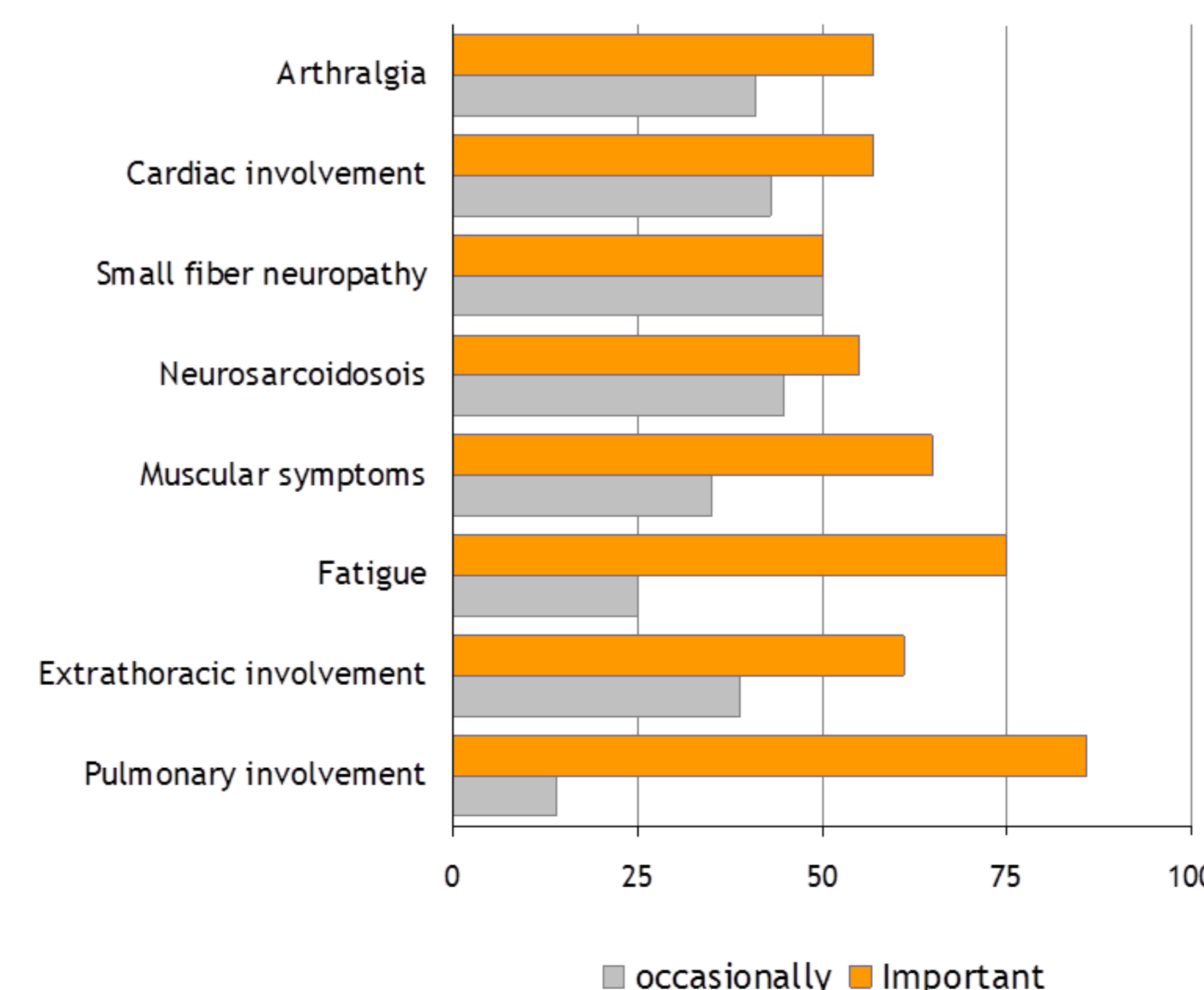


Figure 3. Indications for physical training (PTr) in sarcoidosis: in % of importance.

Table 1. Importance, availability, reimbursement, likelihood of referring patients and regional restrictions of physical training (PTr) for sarcoidosis patients.

%	NL (n=16)	Europe (n=31)	Russia (n=7)	USA & Can (n=24)	Asia & Other (n=9)	Total (n=87)
Do you consider PTr valuable in sarcoidosis?						
yes	100	87	86	75	53	83
don't know	0	13	14	25	47	17
PTr is available in the region where I work for sarcoidosis patients.						
yes/no	88/6	68/29	86/14	67/29	33/44	69/24
don't know	12	3	0	4	22	67
PTr is reimbursed by insurance companies for sarcoidosis in my country.						
yes/no	44/0	23/32	0/86	8/17	22/44	21/28
sometimes	50	20	14	54	22	35
don't know	6	22	0	21	11	16
If you do have access to PTr are you likely to refer sarcoidosis patients?						
never	0	3	0	0	0	1
occasionally	25	39	14	42	56	37
regularly	56	26	43	25	22	32
often/always	19	32	43	33	22	30
Regional restrictions have kept me from referring patients to PTr.						
yes/no	19/63	48/39	29/57	46/42	57/33	41/45
don't know	12	13	14	12	11	14

Conclusions

- Studies regarding the use of physical training or pulmonary rehabilitation in sarcoidosis are limited.
- Sarcoidologists consider physical training as a valuable therapy in sarcoidosis, especially in case of exercise limitations or fatigue.
- Appropriate programs have to be developed and guidelines are really needed to apply for reimbursement of physical training in the management of sarcoidosis.

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