

Marieke T. Drijver-Messelink<sup>1</sup>, Merel Wilbers<sup>1</sup>, Lucia Rijssenbeek-Nouwens<sup>1</sup>, Karin B. Fieten<sup>1,2</sup>

1. Dutch Asthma Centre Davos, Davos, Switzerland 2. Swiss Institute of Allergy and Asthma Research, SIAF, University of Zürich, Switzerland

## Background & Aim

Patients with severe asthma often report subjective fatigue, general psychological distress, and specific psychological symptoms.<sup>1</sup> However, these complaints are often underestimated or not recognized. Altitude climate treatment (ACT) has been reported to improve asthma control, but it is not known whether fatigue and psychological distress also improve.<sup>2,3</sup>

The aim of this study is to assess the prevalence of these symptoms in a severe asthma population before and after ACT.

## Methods

A retrospective study of data collected between 2015 and 2018 in the Dutch Asthma Centre in Davos, Switzerland (altitude 1560 meters) was conducted. Assessments took place before and after ACT during usual care.

We included adult patients with uncontrolled, severe asthma despite using high dose ICS/LABA for more than 1 year, who had at least 2 exacerbations requiring a course of OCS during the past year or received maintenance OCS.

Outcome measures were asthma control (ACQ), subjective fatigue (CIS), general psychological distress, and specific psychological symptoms (both SCL90).

## ACT & psychological treatment

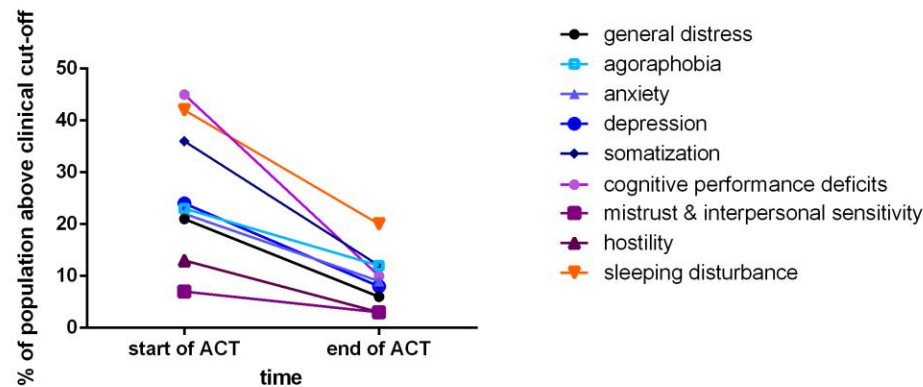
ACT combines a 12 week multidisciplinary treatment program with environmental trigger avoidance in the alpine climate. The treatment program included a personalized exercise program with various indoor and outdoor activities, optimization of medication inhalation techniques, interactive patient education sessions. Psychological treatment consisted of weekly individual sessions based on Cognitive Behavioral Therapy (CBT), addressing disease management skills, behavioral, and emotional aspects of living with a chronic disease and problems such as anxiety, stress and depression. It was not possible to opt-out of psychological treatment sessions.

## Results

102 adult patients with uncontrolled, severe asthma were included.

At baseline, 95% of patients reported severe fatigue (CIS>36), mean(SD) CIS score was 48.5(7.1), ACQ score was 3.1(0.9).

After ACT, 22% of patients reported severe fatigue (CIS>36), mean(SD) CIS score was 26(11.8), ACQ score was 1.3(0.97).



Patients improved statistically significant on all outcomes (p<0.022), except interpersonal sensitivity. Improvement in ACQ was irrespective of improvement in psychological symptoms and general psychological distress.

## Conclusion

Fatigue, general psychological distress and specific psychological symptoms are highly prevalent in patients with severe asthma. ACT results in significant reduction of these symptoms. These findings suggest an important role for the psychologist in a multidisciplinary treatment approach for severe asthma.

## References

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