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## QUALITY OF LIFE ISSUES

The clinical course of sarcoidosis is highly variable, and virtually every organ can be involved. In addition to organ-specific symptoms such as coughing, dyspnea on exertion, chest pain, and wheezing, many patients experience non-specific symptoms such as fatigue, psychologic distress, and pain issues that are disabling, particularly when they become chronic and have a great impact on the quality of life (QOL).

### Fatigue

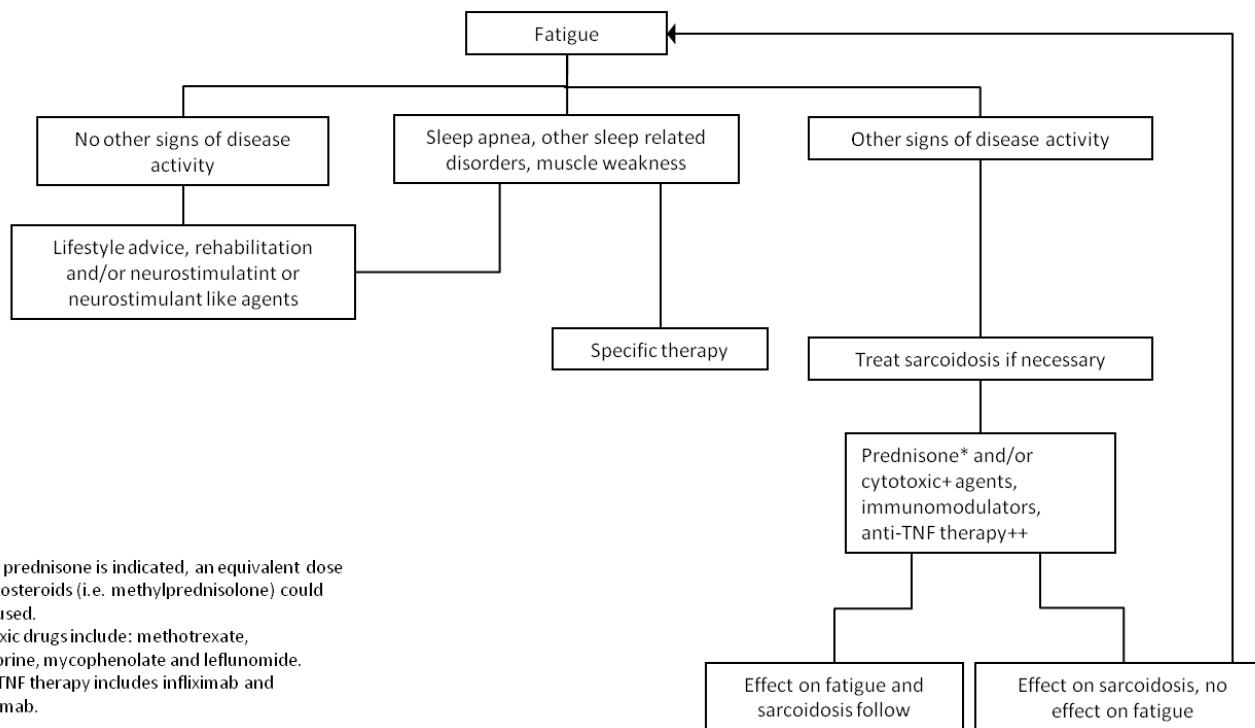
Despite adequate treatment for other manifestations of sarcoidosis, a substantial number of sarcoidosis patients suffer from persistent fatigue. Fatigue appears to be the most frequently reported symptom in sarcoidosis patients. Recent studies suggest that fatigue may persist after all other manifestations of sarcoidosis have resolved.

Fatigue may be debilitating, may become chronic and lead to substantial curtailment of professional, recreational, social, and/or educational activities and, as a consequence, reduced QOL. When features of disease activity - for example, radiological abnormalities and lung function impairment - are resolved during treatment, fatigue and pain may persist. Therefore, objective test results such as chest radiographs, lung-function tests and laboratory parameters do not always reflect the well-being of the patient. Other factors that need to be considered are small fiber neuropathy, autonomic dysfunction, depression, and steroid myopathy. Hypogonadism, hypothyroidism and sleep apnea syndrome can also lead to fatigue.

Reduced respiratory muscle strength and endurance time were demonstrated in sarcoidosis patients with normal lung function test results at rest, especially in those suffering from fatigue. Moreover, fatigue was related to dyspnea, sleeping disorders and to the 6-minute walk distance during an exercise test. Fatigue appeared to be associated with specific types of pain, such as muscle pain, chest pain, arthralgia, abdominal pain and headache.

Little data are available regarding specific treatment for fatigue associated with sarcoidosis. In small double-blinded, placebo-controlled crossover studies, the neurostimulant dexamethylphenidate hydrochloride (d-MPH) and neurostimulant like agent r-modafinil were both associated with a significant reduction in sarcoidosis-associated fatigue. Anti-TNF treatment for other sarcoidosis-related problems also appeared beneficial for fatigue. Other studies suggest that prednisone usage can be associated with patient fatigue.

Unfortunately, these studies were not designed to ascertain if conditions of weight gain, diabetes, depression, inactivity, steroids represent cause or effect for fatigue. It is possible that sleep disturbance or altered mood states are the drivers of fatigue in the sarcoidosis population.. Besides medication, cognitive-behavioral therapy and exercise programs may also be considered in severe or chronic disease or in the development of co-morbid treatment strategy.



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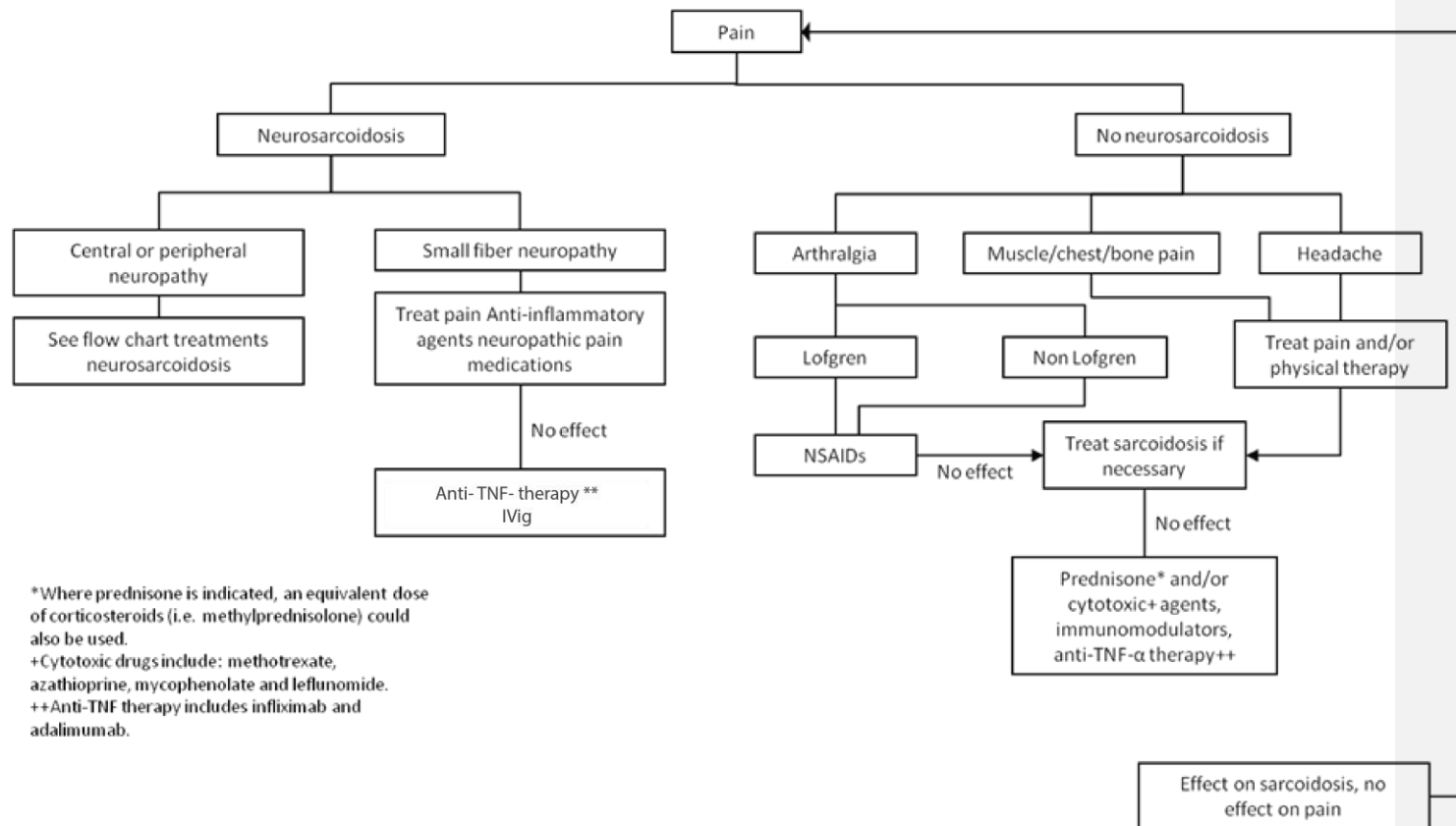
### **Pain, Small Fiber Neuropathy and Cognitive Dysfunction**

Chronic pain is a particular problem for sarcoidosis patients. A stepwise approach to management is shown.

A number of hitherto unexplained symptoms such as fatigue and pain and cognitive dysfunction may - at least partly - be attributable to small fiber neuropathy. However, the relationship between all these features is unclear, and their concomitant occurrence does not demonstrate causality.

It has been observed that sarcoidosis patients with symptoms displayed more depressive symptoms and scored lower on health status compared with patients without current symptoms. Moreover, patients suffering from sarcoidosis often report cognitive complaints, such as memory loss and concentration problems. Cognitive failures are a substantial problem in sarcoidosis patients, even after adjustment for differences in age and sex distribution. No substantial relationship has been found with clinical characteristics, such as disease duration, and severity. In some studies, fatigue, depression and symptoms related to autonomic dysfunction were associated with the occurrence of cognitive dysfunction. These findings emphasize the need for further research to integrate knowledge about coping, cognitive performance, fatigue and depressive symptoms in sarcoidosis into clinical management

Standard anti-inflammatory therapies are usually ineffective for this condition. Neuropathic drugs such as gabapentin may be useful for symptomatic pain relief. For refractory cases, anecdotal reports suggest the effectiveness of intermittent intravenous immunoglobulin (IVIG) therapy and/or anti-TNF agents in selected cases.



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**Treatment Protocol – Authors**

**Robert Baughman, MD**  
University of Cincinnati

**Dan Culver, DO**  
Cleveland Clinic

**Wonder Drake, MD**  
Vanderbilt University

**Marc Judson, MD**  
Albany Medical College

**Lisa Maier, MD**  
National Jewish Health

**Dave Moller, MD**  
Johns Hopkins University

**Adam Morgenthau, MD**  
Icahn School of Medicine at Mt. Sinai

**Milton Rossman, MD**  
Professor of Medicine  
University of Pennsylvania

**Barney Stern, MD**  
Professor of Neurology  
University of Maryland

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**Disclosures.**

**Only prednisone and ACTHAR gel have FDA approval for treatment of sarcoidosis. All other drugs discussed in this document are not FDA approved for treatment of sarcoidosis.**

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Dr Drake has no potential conflicts of interest related to sarcoidosis to report.

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