

Which Factors Predict Fatigue Severity in Persons with Scleroderma? *A study of the GENISOS Cohort*

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Fatigue (feeling tired) is a common problem among persons with scleroderma. Patients rate fatigue as their most bothersome symptom. Fatigue can impact their daily activities and is an important predictor of work disability.

We report on results of a recently published study in “PLoS ONE” that investigated fatigue in persons with scleroderma in the Genetics versus ENvironment In Scleroderma Outcome Study (GENISOS) cohort. This report is the first study on course and predictors of fatigue over time in scleroderma.

GENISOS is a longitudinal study of patients with scleroderma funded by the National Institutes of Health (NIH). The study is conducted at three sites: the University of Texas Health Science Center at Houston (Dr. Maureen Mayes and Dr. Shervin Assassi), the University of Texas Medical Branch at Galveston (Dr. Emilio Gonzalez and Dr. Brock Harper) and the University of Texas Health Science Center at San Antonio (Dr. Hilda Draeger).

Participants in GENISOS are evaluated every six months during the first three years, and then each year. At each visit, patients fill out a form called Fatigue Severity Scale for assessment of fatigue.

In this study, fatigue severity did not increase or decrease over time in the overall group. Although patients with more lung disease as measured by DLco (a test obtained during pulmonary function testing) experienced an increase in their fatigue levels over time. Basically, participants with more lung disease at study entry (lower DLco) had an increase in their fatigue severity on follow-up visits.

We also investigated which clinical factors at study entry were associated with higher repeated measurements of fatigue. Gastrointestinal (GI) and joint problems were the two clinical predictors of higher fatigue levels. GI problems such diarrhea and difficulty with swallowing were associated with higher fatigue levels. Similarly, patients with more swelling and tenderness in joints experienced higher fatigue levels.

Next, we examined whether other characteristics, such as factors reported by patients were also important predictors of fatigue. In this analysis, better coping skills with the disease predicted lower fatigue levels while more pain was related to higher fatigue levels. These findings parallel results of studies conducted in other rheumatic diseases. There is evidence in patients with rheumatoid arthritis that improved coping skills, which help patients adapt to the challenges of disease, can lead to improved fatigue levels. Furthermore, the severity of pain was also a predictor of fatigue in patients with lupus.

It is also important to note that demographic factors such as age, gender or ethnicity were not predictors of fatigue in persons with scleroderma.

In summary, this study identifies several factors that are important predictors of fatigue and raises the possibility that better treatment of these factors might lead to more effective management of fatigue. Specifically, better treatment of lung, gastrointestinal and joint problems, as well as pain might lead to improved fatigue levels. Furthermore, helping patients develop better coping skills might contribute to decreased fatigue levels over time.

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