

# Obesity Affects Severity of Symptoms and Quality of Life in Patients with Fibromyalgia

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Fibromyalgia is a chronic pain condition affecting 2-6% of the US population [1,2], and is characterized by widespread pain, tenderness, and various associated features, including fatigue, morning stiffness, unrefreshing sleep, and cognitive symptoms and physical and psychological impairment. Fibromyalgia has a major impact on quality of life (QOL). It has been shown that women with fibromyalgia have QOL below the general population and comparably lower than patients with other chronic conditions such as rheumatoid arthritis, osteoarthritis, permanent ostomy, chronic obstructive pulmonary disease, insulin-dependent diabetes, advanced cancer, or congestive heart failure [3].

In the United States, about one-third of the population is classified as obese, and the obesity epidemic is associated with the costs and health burden [4]. Associations between body mass index (BMI) and fibromyalgia symptoms, including increased pain sensitivity, and poorer physical function, sleep and QOL has been reported [5,6].

We assessed body mass index (BMI) in 888 patients with fibromyalgia who were seen at the Fibromyalgia Treatment Program (FTP) [7,8]. When our patient population was divided into 4 groups (nonobese, overweight, obese and severely obese) based on BMI, obesity (BMI  $\geq 30$ ) was common in about one half of our patients, and one quarter was severely obese (BMI  $\geq 35$ ). All patients in the study completed the Fibromyalgia Impact Questionnaire (FIQ) and the Short-Form-36 Health Status Questionnaire (SF-36) at the time of initial evaluation and again 6-12 months after completion of the FTP. Overall, groups of patients with greater BMI reported worse fibromyalgia symptoms and quality of life (QOL), measured by the FIQ and SF-36. Patients who were severely obese reported significantly higher pain scores than non-obese and overweight patients [8].

We also found that obesity appears to play some role in poorer treatment response to the FTP. Post hoc analysis among the 4 groups showed that differences in treatment response resided primarily in the severely obese group (BMI  $\geq 35$ ) compared with the other groups. The severely obese group showed less improvement compared with nonobese in the SF-36 physical functioning and role-emotional subscales [9].

Although our cross sectional study is not able to answer causal relationship between obesity and fibromyalgia, higher rate of obesity in patients with fibromyalgia than normal population may be caused by vicious cycle of pain and physical inactivity. Chronic pain and overweight and obesity likely have additive effects and may lead to decreased QOL and increased disability.

Studies on weight loss treatment in patients with fibromyalgia, behavioral weight loss program [10] and diet weight loss treatment, [11] have demonstrated significant improvement in QOL. With chronic pain and fatigue and other multitude of fibromyalgia symptoms adversely affecting QOL, it would be more challenging for patients with fibromyalgia to participate in a weight management program than obese subjects without fibromyalgia. It is not known what type of weight loss programs would be most beneficial for patients with fibromyalgia.

Our study results highlight the importance of including weight management strategies in treatment programs for patients with fibromyalgia, especially for those severely obese (BMI  $\geq 35$ ).

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