The superiority of true drug treatment over placebo in reducing symptoms of fibromyalgia syndrome (FMS) is small. Drug placebo treatment of functional somatic syndromes (FSS) such as FMS has been discussed. We determined the magnitude of placebo responders in drug trials with FMS patients to substantiate further research on placebo treatment of FSS. CENTRAL, MEDLINE, Scopus, and the databases of the U.S. National Institutes of Health and the Pharmaceutical Research and Manufacturers of America were searched for randomized, double-blind, placebo-controlled trials with a parallel design and treatment duration of $\geq$ 12 weeks in FMS patients from inception to 31 December 2010. The magnitude of placebo responders was assessed by the pooled estimate of patients with a 30% and 50% reduction in pain. Thirty studies with 3,846 patients on placebo were included. The pooled estimate of a 30% placebo pain reduction was 30.8% (95% confidence interval (CI) 29.4-32.3%) and of a 50% placebo pain reduction was 18.8% (95% CI 17.5-20.1%). The pooled estimate of the risk ratio of 30% pain reduction by true drug versus placebo was 1.38 (95% CI 1.27-1.49). The pooled estimate of the risk ratio of 50% pain reduction by true drug versus placebo response was 1.57 (95% CI 1.36-1.81). The magnitude of responders to placebo in drug trials of FMS is substantial. The efficacy,
safety, and costs of drugs recommended for FMS therapy and open-label placebo should be compared in large multinational trials sponsored by public institutions. The English full-text version of this article is available at SpringerLink (under "Supplemental").