

PSYCHOLOGICAL PAIN TREATMENT IN FIBROMYALGIA: SYSTOLIC EXTINCTION TRAINING (SET) RESTORES BAROREFLEX SENSITIVITY, REDUCES PAIN SENSITIVITY AND CLINICAL PAIN REPORT

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INTRODUCTION.


Important components of intrinsic pain regulatory systems are modulated by cardiovascular dynamics that influence baroreceptor sensitivity (BRS). The present study evaluated the effects of extinction training combined with electrical stimulation administered during either the systolic or diastolic phases of the cardiac cycle delivered in a randomized order ("systolic extinction training", SET) in patients with fibromyalgia syndrome (FMS). SET was compared to treatment with extinction training combined with electrical stimulation delivered independent of the cardiac cycle a "placebo" condition (PC).

METHOD.

Forty patients who fulfilled the American College of Rheumatology criteria for FMS and showed an elevated blood pressure response to a laboratory stressor termed hypertensive stress reactivity were randomly assigned to SET (n = 20), or PC (n = 20). Assessments of clinical pain, pain threshold, pain tolerance, baroreflex sensitivity (BRS), blood pressure and heart rate, cognitive and behavioural variables as well as sleep architecture and sympathetic outflow measured by microneurography were performed pretreatment and post-treatment as well as at 6 to 12 months posttreatment.

Design of Systolic Extinction Training - SET

10 Sessions with 2 hours in 5 weeks



Hour 1: Structured Extinction Training with Training of Perception and Increase of physical Activity
Hour 2: BRS modifying-Stimulation by delivering pain-free and two different pain stimuli adjusted by individual pain tolerance dependent on cardiac cycle

Figure 1. Design of SET

RESULTS.

SP	11	12	13	14
1100	0	0	0	0
1105	0	0	0	0
1110	0	0	0	0
1115	0	0	0	0
1120	0	0	0	0
1125	0	0	0	0
1130	0	0	0	0
1135	0	0	0	0
1140	0	0	0	0
1145	0	0	0	0
1150	0	0	0	0
1155	0	0	0	0
1200	0	0	0	0
1205	0	0	0	0
1210	0	0	0	0
1215	0	0	0	0
1220	0	0	0	0
1225	0	0	0	0
1230	0	0	0	0
1235	0	0	0	0
1240	0	0	0	0
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1455	0	0	0	0
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1510	0	0	0	0
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1520	0	0	0	0
1525	0	0	0	0
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1535	0	0	0	0
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1545	0	0	0	0
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1740	0	0	0	0
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1750	0	0	0	0
1755	0	0	0	0
1800	0	0	0	0
1805	0	0	0	0
1810	0	0	0	0
1815	0	0	0	0
1820	0	0	0	0
1825	0	0	0	0
1830	0	0	0	0
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1855	0	0	0	0
1900	0	0	0	0
1905	0	0	0	0
1910	0	0	0	0
1915	0	0	0	0
1920	0	0	0	0
1925	0	0	0	0
1930	0	0	0	0
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1940	0	0	0	0
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2025	0	0	0	0
2030	0	0	0	0
2035	0	0	0	0
2040	0	0	0	0
2045	0	0	0	0
2050	0	0	0	0
2055	0	0	0	0
2100	0	0	0	0
2105	0	0	0	0
2110	0	0	0	0
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2145	0	0	0	0
2150	0	0	0	0
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2245	0	0	0	0
2250	0	0	0	0
2255	0	0	0	0
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2305	0	0	0	0
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2805	0	0	0	0
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3115	0	0	0	0
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3135	0	0	0	0
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3145	0	0	0	0
3150	0	0	0	0
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