and this was used to form 3 levels of exposure (ie, low [0-1], medium [2-3], high [≥4]). Linear mixed model ANOVAs found that all groups demonstrated significant TS-NFR and TS-Pain; however, the degree of summation was greatest in the high exposure group (p<.05). TS-NFR and TS-Pain were similar in the other groups (ps>.05). These findings suggest that greater trauma exposure is associated with greater amplification of pain and spinal nociception. Future research should examine potential psychosocial (eg, PTSD symptoms, catastrophizing, emotion regulation) or biological (eg, allostatic load) factors that mediate the relationship between trauma exposure, TS-NFR and TS-Pain. Further study is needed to determine whether these markers of central sensitization might contribute to the development of PTSD and/or chronic pain syndromes in those who are exposed to multiple traumatic events.

### Treatment: Non-Pharmacological

**448) Self-management strategies for pain reported in population-based surveys**: A systematic review

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Controlled clinical trials usually test the effectiveness of a single treatment whereas the typical individual with chronic pain may use multiple strategies to manage their pain. The purpose of this systematic review was to determine the types of management strategies reported by individuals with chronic pain to manage chronic pain, the average number of strategies used, outcomes, and side effects. To be included in the systematic review, reports of population surveys of adults with chronic pain, as defined by the authors, had to be published in English, include chronic pain from any cause, and include information on the treatment strategies used by respondents. Search terms included “pain,” “self-care,” “self-management,” “self-treatment,” and “adult” and the search strategy included systematic searches of Pubmed, Embase, Cochrane Library, PsycINFO, CINAHL, Web of Science, International Pharmaceutical Abstracts, searches of reference lists, and citation searches as well as some key websites such as the CDC and NIH. A total of 14 study reports were identified. Sample size ranged from 272 to 4839; mean age ranged from 42 to 81 and 51 to 69%, female. All reports included information on medications used to manage pain; 6 reported other medical strategies; 9 reported physical therapy; 4 reported psychological strategies; and 11 reported non-medical strategies. Limited data were reported on the number of strategies used; 23% used 6 or more medications in one study, and 51% used 3 or more in another study. Outcomes reported included inadequate control of pain (40%), good relief (87%), and 36% as effective. Few side effects were reported; two studies reported constipation, nausea, fatigue. Population-based surveys of chronic pain patients indicated a large number of strategies used to manage pain, however they provide little information on the average number of strategies used, the effectiveness of the strategies, or resulting side effects.

**449) Kinesio Tape for Pain Reduction: More than a Placebo Effect?**

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Athletes, athletic trainers, chiropractors and many other people have used Kinesio tape to help alleviate pain symptoms. Currently, no clear reason exists as to why pain is relieved with the use of Kinesio tape and whether the analgesic effect is simply a placebo effect. Additionally, the most effective taping parameters (i.e., tension of tape) for pain reduction remain unknown. The purpose of this study was to determine if Kinesio tape applied at various tensions is effective in reducing pain intensity and whether the analgesic effect is simply a placebo effect. Further study is needed to determine if Kinesio tape's analgesic effect is not just a placebo, with pain-reducing effects partially depending on the tension of the tape.

**450) Efficacy of Vibrating Gloves for Chronic Hand Pain due to Osteoarthritis**

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This study investigated the efficacy of vibrating gloves for women with persistent hand pain due to osteoarthritis (OA) to see if mild compression and small vibrating motions that massage the hands had lasting benefit with periodic use. Sixty women with OA hand pain were randomized to either use the gloves for 30 minutes once a day for a month or not. Overall, the results were consistent with the literature indicating that active coping strategies are associated with better pain outcomes than passive strategies. Specifically, they suggest that different types of prayer are more or less adaptive, which contributes to a more nuanced