

Health Insights Today

A SERVICE OF CLEVELAND CHIROPRACTIC COLLEGE

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Mind-Body News

When reading reports on new research, it is important to remember that no single study should be seen as providing the whole truth. The following reports offer helpful clues but in most cases further research is needed before firm conclusions can be drawn.

Guided Imagery Helpful for Pregnant Women

Prenatal maternal stress is associated with adverse birth outcomes and may be reduced by relaxation exercises. Swiss researchers compared the immediate effects of two active and one passive 10-minute relaxation technique on perceived and physiological indicators of relaxation. 39 healthy pregnant women recruited at the outpatient department of the University Women's Hospital Basel participated in a randomized controlled trial with an experimental repeated measure design. Participants were assigned to one of two active relaxation techniques, progressive muscle relaxation (PMR) or guided imagery (GI), or a passive relaxation control condition. Self-reported relaxation on a visual analogue scale and state anxiety, endocrine parameters indicating hypothalamic-pituitary-adrenal axis (cortisol and ACTH) and sympathetic-adrenal-medullary system activity (norepinephrine and epinephrine), as well as cardiovascular responses (heart rate, systolic and diastolic blood pressure) were measured at four time points before and after the relaxation exercise.

Between group differences showed that compared to the PMR and control conditions, GI was significantly more effective in enhancing levels of relaxation and together with PMR, GI was associated with a significant decrease in heart rate. Within the groups, passive as well as active relaxation procedures were associated with a decline in endocrine measures except epinephrine. Taken together, these data indicate that different types of relaxation had differential effects on various psychological and biological stress systems. GI was especially effective in inducing self-reported relaxation in pregnant women while at the same time reducing cardiovascular activity.

Urech C, Fink NS, Hoesli I, Wilhelm FH, Bitzer J, Alder J. Effects of relaxation on psychobiological wellbeing during pregnancy: A randomized controlled trial. *Psychoneuroendocrinology*. Apr 21 2010.

Both Mental and Physical Exercises Help Cognitive Function in Old Age

Both physical and mental activity have been reported to have beneficial effects on cognitive function in old age. A randomized controlled trial by German investigators evaluated a cognitive and a physical standardized 6-month activity intervention (3 x 1.5 h/wk). Two hundred fifty nine healthy women aged 70-93 years were randomized to a computer course (n = 92), an exercise course (n = 91), or a control group (n = 76), of whom 230 completed the 6-month assessment. Group differences were measured over a period of 6 months in episodic memory (story recall, possible range, 0-21; word recall, possible range, 0-16), executive control (working memory), and verbal fluency.

In contrast to the control group, both the exercise group and the computer group showed improved delayed story recall. They maintained performance in delayed word recall and working memory (time measure) as opposed to the control group that showed a decline. The researchers concluded that in healthy older women, participation in new stimulating activities contributes to cognitive fitness and might delay cognitive decline. Exercise and computer classes seem to generate equivalent beneficial effects.

Klusmann V, Evers A, Schwarzer R, et al. Complex mental and physical activity in older women and cognitive performance: a 6-month randomized controlled trial. *J Gerontol A Biol Sci Med Sci*. Jun 2010;65(6):680-688.

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Multidisciplinary Body-Mind Program Helps Chronic Pain

Cognitive behavioral therapy is useful in the treatment of chronic pain conditions, which have become increasingly common. Researchers in the rehabilitation unit of a university hospital in Norway evaluated the effects of a multidisciplinary pain management program on health-related quality of life (HRQL), as measured by the Short Form Health Survey (SF-36), pain perception as measured by the Brief Pain Inventory, and readiness-to-change as measured by the Pain Stages of Change Questionnaire. A pretest-post-test quasi-experimental design, with waiting list controls and baseline and post-test measures, was used.

Of 117 people suffering from chronic pain, 113 completed the 8-week multidisciplinary pain management program. The patients were consecutive referrals. Inclusion criteria were: adults (18-67 years), pain lasting over 6 months, motivation and no ongoing litigation. Exclusion criteria were affected by major mental disorders or major medical conditions requiring treatment. The intervention was based on a cognitive behavioural approach. Therapeutic dialogues and training, combined with physical activity, were provided to a fixed plan, including homework. The findings suggest that this program has the potential to improve HRQL, reduce pain intensity and interference, and contribute to improvement in readiness-to-change. Statistically significant results are supplemented by results showing their clinical significance. The researchers concluded that effective treatment results involve identifying and addressing the important and changeable influences maintaining pain problems such as acceptance, understanding the mind-body connection and self-management.

Dysvik E, Kvaloy JT, Stokkeland R, Natvig GK. The effectiveness of a multidisciplinary pain management programme managing chronic pain on pain perceptions, health-related quality of life and stages of change--A non-randomized controlled study. *Int J Nurs Stud.* Jul 2010;47(7):826-835.