Greenspan JD, Craft RM, LeResche L, et al, and the Consensus Working Group of the Sex, Gender, and Pain SIG of the IASP. Studying sex and gender differences in pain and analgesia: A consensus report. Pain 2007;132:S26–S45.

This consensus report of the Sex, Gender and Pain Special Interest Group of the International Association for the Study of Pain deals with *(1)* what is known about sex and gender differences in pain and analgesia; *(2)* the "best practice" guidelines for pain research with respect to sex and gender; and *(3)* the crucial questions to address in the near future. The report summarizes *(1)* experimental studies of sex differences in pain and analgesia (sex differences mediated by gonadal hormones, testing across the estrous cycle in animal and human studies, hormone manipulations in animal and human studies, and appropriate pain tests in both animal and human studies); *(2)* clinical and psychosocial studies of sex and gender differences in pain and analgesia (age, race/ethnicity/culture, history, comorbidities, health vs disease, disability, medications, physical variables, beliefs, coping, mood, and clinic vs community); and *(3)* translational research enabling interactions between clinical experience and human experimental research (temporal summation of pain and opioid analgesia).

The future direction of research into regarding sex differences in pain/analgesia is outlined in order to determine mechanisms that contribute to the generally greater prevalence of pain in females than males, to discover how sex-specific mechanisms of pain/analgesia can be exploited to improve pain management for both sexes, and to determine differences in outcome when similar treatments are applied. Issues that should be addressed to attain this goal are also pointed out. Although the authors summarize that the evidence does not appear strong enough to warrant sex-specific pain interventions in most situations, their conclusion is that the inclusion of sex as a factor in clinical trials and the reporting of any differences in outcomes are paramount in addressing the lack of research in this area.

The importance of the report is in the comprehensive summary of the present knowledge from basic science, clinical, and psychosocial pain researchers as well as from recognized experts in sexual differentiation and reproductive endocrinology. This makes it important reading for any researcher who conducts research in the field of sex, gender, and pain. *(IE)*

Smith P, Mosscrop D, Davies S, Sloan P, Al-Ani Z. The efficacy of acupuncture in the treatment of temporomandibular joint myofascial pain: A randomized controlled trial. J Dent 2007;35:259–267.

Systematic reviews suggest that acupuncture is effective in the treatment of temporomandibular joint (TMJ) pain and dysfunction, but no trials have been presented that control for possible placebo effects of the technique. The aim of the study by Smith et al was to compare the effect of "real" acupuncture and new sham-acupuncture in the treatment of TMJ myofascial pain (Group 1 patients according to the Research Diagnostic Criteria for Temporomandibular Disorders) to establish the true efficacy of acupuncture.

The study was planned as a double-blind randomized controlled trial on 27 patients. One group (n = 15) received real acupuncture treatment and a second group (n = 12) received sham-acupuncture using a special blunt sham-acupuncture needle that slides within its handle and does not penetrate the skin. Both the assessor and the patient were blinded regarding the group allocation. Baseline assessment of the outcome variables was made before the first treatment session and repeated after the last treatment.

The results demonstrated that although both procedures showed improvement on some of the clinical signs, only real acupuncture had a significant beneficial influence on parameters such as mean pain intensity, maximum mouth opening, and maximum pain-free opening. Additionally, real acupuncture had a greater influence on the clinical outcome measure of TMJ myofascial pain than those of sham acupuncture, with most of the differences reaching a level of statistical significance.

The authors summarize that acupuncture has a positive influence on the signs and symptoms of TMJ myofascial pain, but this conclusion should be considered with care due to the small size of the groups. The study supports positive findings of other research into acupuncture and TMJ myofascial pain and helps clarify that the physiologic effects of acupuncture may be beyond those of placebo. This is in disagreement with several meta-analyses that suggest that acupuncture has no or limited effects compared to placebo. The main strength of the study lies in the use of a sham-device which enables a controlled study of acupuncture. It provides initial clinical evidence to support the analgesic effect of acupuncture and the physiological effects which may operate through the endogenous opiate-mediated pathways. *(IE)*

Abrahamsen R, Baad-Hansen L, Svensson P. Hypnosis in the management of persistent idiopathic orofacial pain—Clinical and psychosocial findings. Pain 2007 Aug 3 [Epub ahead of print].

Chronic orofacial pain can be difficult to diagnose and manage since patients often present complex and diffuse symptoms without any radiologic or clinical pathologic findings. The aim of this study was to test the hypothesis that treatment with hypnosis in patients suffering from persistent idiopathic orofacial pain could improve self-reported measures of pain (primary outcome parameter), use of analgesics, sleep quality, health-related quality of life, and psychologic symptoms (secondary outcome parameters). The research was designed as a patient-blinded, controlled, and randomized study.

Patients (n = 41) suffering from persistent idiopathic orofacial pain were randomized to active hypnotic intervention or simple relaxation (as control) for 5 individual 1-hour sessions. The primary outcome was average pain intensity, which was scored 3 times daily in a pain diary using a visual analog scale (VAS). Secondary outcome measures were pain quality (assessed by McGill Pain Questionnaire), psychologic symptoms (assessed by the Symptom Check List [SCL], quality of life (assessed by SF36), sleep quality, and consumption of analgesic.

The study showed that change in VAS pain scores from baseline to the last treatment was greater in the hypnosis group compared to the control group ($P < .03$). Additionally, in the hypnosis group, highly hypnotic susceptible patients had a greater decrease in VAS pain scores when compared to less susceptible patients ($P < .02$). After the last treatment, statistically significant differences were found between groups in perceived pain area and the use of weak analgesics ($P < .03$). No statistically significant changes were found in SCL or SF36 scores from baseline to the last treatment.

A significant effect of hypnosis was shown when used on patients with persistent idiopathic types of orofacial pain, particularly in highly susceptible patients. Treatment with hypnosis, which is considered safe and without negative side effects, could be a valuable option for patients suffering from persistent idiopathic orofacial pain. The study introduces high research standards (controlled, randomized study) to the field of hypnosis and pain research and demonstrates that hypnosis is effective and should be considered an acceptable treatment tool.

Potvin S, Marchand S. Hypoalgesia in schizophrenia is independent of antipsychotic drugs: A systematic quantitative review of experimental studies. Pain 2007 Dec 19 [Epub ahead of print]

Reports indicate that in contrast to healthy subjects, individuals with schizophrenia are insensitive to physical pain associated with illness and injury. However, over the last decade, experimental studies have measured pain perception in schizophrenia with mixed results. This meta-analysis, which included 11 studies, was conducted to determine whether the scientific literature confirms the hypothesized hypoalgesia in schizophrenia. For the composite analysis, a positive, moderate, and significant effect size estimate emerged (n = 497; Hedges's g = 0.437; P = .005), suggesting that patients with schizophrenia show a diminished response to experimentally induced pain. Secondary analyses showed that drug-free patients also have hypoalgesic responses and that sensory thresholds are increased in schizophrenia patients.

The results of the meta-analysis substantiate the hypothesis of a diminished pain response in schizophrenia and suggest that hypoalgesia in schizophrenia cannot be solely explained by the effects of antipsychotic drugs and that it may not be a pain-specific blunted response.

This analysis draws attention to individuals whose ability to experience and/or report pain may be impaired. Since pain is often used as a diagnostic tool, the decrease in pain reaction or report can lead to misdiagnosis and undertreatment. Therefore, the possible hypoalgesic response in psychiatric patients should be acknowledged. Further studies are important to determine the clinical and biological correlates of hypoalgesia in schizophrenia; to verify whether stable schizophrenia patients show the same diminished sensitivity to pain; to investigate the various components (eg, limbic, cortical, autonomic) of pain in schizophrenia in greater detail; and to characterize the behavioral and health consequences of hypoalgesia in schizophrenia. *(IE)*

Kunz M, Scharmann S, Hemmeter U, Schepelmann K, Lautenbacher S. The facial expression of pain in patients with dementia. Pain 2007;133(1–3):221–228.

Patients with dementia, especially those with moderate to severe dementia, often have a diminished capacity to report pain. Kunz et al investigated facial responses during potentially noxious stimulation in 42 patients with dementia and 54 aged-matched healthy controls subjected to mechanically induced pain of various intensities. Faces were videotaped during pressure stimulation and analyzed using the Facial Action Coding System. Self-report pain ratings were also assessed using a 6-point verbal category scale.

Dementia had a significant main effect on the frequency and intensity of facial responses to pressure stimulation. The frequency and intensity of facial responses were markedly increased in dementia patients compared to healthy controls. Facial responses were closely related to the stimulation intensity, especially in patients with dementia. Dementia also had a strong effect on the capacity of the subjects to provide self-report ratings. Healthy controls continuously provided self-report ratings (100%), but the percentage of stimuli that dementia patients responded to with valid self-report ratings varied, showing a highly significant correlation between the degree of cognitive impairment and the percentage of valid self-report ratings (with a decrease in cognitive functioning, the ability to provide self-report ratings declined in patients with dementia). The increase of pain intensity ratings did not differ between the groups. That is, no differences were found between groups in self-report ratings, but the capacity to provide these self-report ratings was diminished in patients with dementia.

Facial responses of dementia patients and healthy individuals to noxious stimulation encode the intensity of stimulation. Similar to the systematic review by Potvin et al (see above), the study draws attention to individuals whose ability to communicate their sensations may be severely impaired. With the increase in population age and the concomitant increase in the percentage of patients with dementia in the general population, pain problems in these patients should not be ignored. The facial expression of pain has the potential to serve as an alternative pain indicator in patients with dementia, as in patients with more severe cognitive impairments and compromised self-report. *(IE)*