Review of International Literature

D. Corydon Hammond
Associate Editor

Aikins, D., & Ray, W. J. (2001). Frontal lobe contributions to hypnotic susceptibility: A neuropsychological screening of executive functioning. International Journal of Clinical & Experimental Hypnosis, 49(4), 320-329. A theory of hypnosis, based on neuropsychological research with frontal lobe dysfunction patients, has suggested that hypnosis may be mediated by a dissociation between contention-scheduling mechanisms and a supervisory attentional system. This study tested this hypothesis with 9 high hypnotizable and 7 low hypnotizable subjects who were given 4 tests of executive functioning. During a baseline condition, high hypnotizables performed significantly better on 1 of the 4 tests (the Wisconsin Card Sorting Test). The possible role of increased cognitive flexibility and processing information in a more fluid way is discussed as a possible component of the dissociated control model of hypnosis. Address for reprints: Dr. William J. Ray, Dept. of Psychology, Pennsylvania State University, University Park, PA 16803, USA. E-mail: wjr@psu.edu.

Anbar, R. D. (2001). Self-hypnosis for the treatment of functional abdominal pain in childhood. Clinical Pediatrics, 40(8), 447-451. Functional abdominal pain (recurrent abdominal pain in the absence of an identifiable physiologic cause), can respond to psychological intervention in appropriate patients. In this case report series, functional abdominal pain of 4 of 5 pediatric patients resolved within 3 weeks after a single session of instruction in self-hypnosis. The author concludes that the potential impact of widespread application of self-hypnosis training may be large, because abdominal pain is believed to be the most common recurrent physical symptom attributable to psychological factors among children and adolescents. Address for reprints: Dr. R. D. Anbar, Department of Pediatrics, State University of New York, Upstate Medical University, Syracuse 13210, USA.

Baider, L., Peretz, T., Hadani, P. E., & Koch, U. (2001). Psychological intervention in cancer patients: A randomized study. General Hospital Psychiatry, 23(5), 272-277. The authors examined the long-term effects of progressive muscle relaxation with guided imagery on the psychological distress of patients recently diagnosed with localized cancer who were being treated at a University Hospital. All 116 patients who met the inclusion criteria were randomized into an intervention group and a control group on a 3:1 basis. The intervention was intended to decrease psychological distress and increase the patient’s sense of internal control. The Brief Symptom Inventory (BSI) and the Impact of Events Scale (IES) were used to evaluate psychological distress...
within 1 month of diagnosis, 3 months later (shortly before starting the intervention), and 6 months after the end of the relaxation/imagery. At the final assessment, the effect of the intervention on psychological distress was positive. Although relatively modest, the effect was statistically significant when assessed in terms of the Global Severity Index (GSI) (a decrease of 2.3 points in the GSI of the treatment group as compared to an increase of 1.2 points in the GSI of the control group P = .005). Despite the moderately positive findings, the authors suggest that the results might be more meaningful if cancer patients are first screened for psychological distress and then those with a low distress level not justifying intervention are excluded, and only then randomized for participation in the study. Address for reprints: Dr. L. Baider, Sharett Institute of Oncology, Hadassah University Hospital, 91120, Jerusalem, Israel.

Barnier, A. J., Bryant, R. A., & Briscoe, S. (2001). Posthypnotic amnesia for material learned before or during hypnosis: Explicit and implicit memory effects. *International Journal of Clinical & Experimental Hypnosis, 49*(4), 286-304. This study evaluated the effect of posthypnotic amnesia on explicit and implicit memory for material learned before or during hypnosis. Using a paradigm to achieve greater methodological clarity and more consistent with contemporary memory research, high and low hypnotizables were presented with a word list (not a highly relevant memory stimulus) before or during hypnosis, then given suggestions for amnesia and tested on memory tasks. Under the effects of posthypnotic amnesia, highs demonstrated equivalent levels of priming to lows. However, when analysis concentrated only on those high hypnotizables who remained amnestic after the implicit memory tasks, they confirmed perceptual but not semantic priming. The impact of methodological choices on theoretical interpretations of memory performance are highlighted. Address for reprints: Dr. Amanda J. Barnier, School of Psychology, University of New South Wales, NSW 2052, Australia. E-mail: A.Barnier@unsw.edu.au.

Boyer, M. F. M. (2001). Matching hypnotic interventions to pathology types: A working model for expressive psychotherapies. *International Journal of Clinical & Experimental Hypnosis, 49*(4), 352-360. The author believes Kohut’s typology of Guilty Man and Tragic Man are clinically useful constructs. He believes that an expressive therapeutic approach focused on ambivalent conflict is the indicated strategy for the Guilty Man, while a restructuring expressive approach is the right treatment for the Tragic Man. Helen Watkins’ hypnotic technique called the Door of Forgiveness is indicated for conflict-focused therapies, and the Conference Table Technique of Gruenewald is believed to be indicated for restructuring therapies. A positive discussion commentary on the paper follows by Elgan Baker on pages 361-363 in which he states that he “could not agree more with Boyer’s basic thesis.” Address for reprints: Michael F. M. Boyer, M.Sc., Geerdinkhof 119, 1103 PT, Amsterdam, The Netherlands. E-mail: michelboyer@zonnet.nl.

Chen, A. C. (2001). New perspectives in EEG/MEG brain mapping and PET/fMRI neuroimaging of human pain. *International Journal of Psychophysiology, 42*(2), 53-65. With the maturation of EEG/MEG brain mapping and PET/fMRI neuroimaging in the 1990s has come greater understanding of pain processing in the brain. This review outlines the difficulties in defining and studying human pain, then focusing on methods of studying the brain in experimental and clinical pain, and
reviewing the cohesive results of brain mapping and neuroimaging of noxious perception. The implications of pain research in understanding human consciousness and the relevance to clinical care as well as to the basic science of human psychophysiology are also discussed. Brain research is not starting to unveil the age-old puzzles of pain-illusion, hypnosis, and placebo in pain modulation. The neurophysiological and neurohemodynamic brain measures of experimental pain can now largely satisfy the psychophysiologist’s dream of being able to model the body-brain, brain-mind, mind-matter duality in an inter-linking 3-P triad: physics (stimulus energy); physiology (brain activities); and psyche (perception). The greater challenges that lie ahead are: (a) how to integrate a cohesive theory of human pain in the brain; (b) what levels of analyses will be necessary and sufficient; (c) what constitutes the structural organization of the pain matrix; (d) what are the modes of processing across and among the sites of these structures; and (e) how can neural computation of these processes in the brain be carried out? They cite that two foreseeable impacts on clinical sciences and basic theories from brain mapping/neuroimaging are the plausible central origin in persistent pain and integration of sensory-motor function in pain perception.

DePascalis, V., Magurano, M. R., Bellusci, A., & Chen, A. C. (2001). Somatosensory event-related potential and autonomic activityto varying pain reduction cognitive strategies in hypnosis. Clinical Neurophysiology, 112(8), 1475-1485. Issues of differential effects among cognitive strategies during hypnosis for controlling of human pain are under active debate. This study, which employed measures of pain perception, electrocortical and autonomic responses, was focused on determining these pain-related modulations. Somatosensory event-related potentials (SERPs) to noxious stimuli under an odd-ball paradigm were recorded at the frontal, temporal and parietal regions in 10 high, 9 medium, and 10 low hypnotizable right-handed young women, at waking baseline, varying cognitive strategies (deep relaxation, dissociative imagery, focused analgesia) in hypnosis and in placebo conditions. Skin conductance levels and phasic heart rate (HR) were also recorded. The analysis focused on the frequent standard trials of the odd-ball SERPs and repeated measures analysis of variance was conducted to examine the experimental effects. Focused analgesia produced the largest reduction in pain rating, more in the high than low hypnotizable subjects. In the high hypnotizable subjects, the N2 amplitude was greater over frontal and temporal scalp sites than over parietal and central sites, whereas in moderately and low hypnotizable subjects, N2 was greater over temporal sites than over frontal, parietal, and central sites. These subjects also displayed a larger N2 peak over temporal sites during focused analgesia than in the other conditions. The P3 amplitude was smaller under deep relaxation, dissociative imagery, and focused analgesia in the high hypnotizable subjects. For these subjects, the smallest P3 peaks were obtained for dissociated imagery and focused analgesia over frontal and temporal sites. In contrast, for the P3 peak, low hypnotizable subjects failed to show significant condition effects. In all of the subjects, the skin conductance and HR were smaller during hypnotic suggestions than in the waking state. It was concluded that the effect of pain modulation is limited to high hypnotizable subjects rather than low hypnotizable individual. Higher frontal-temporal N2 and smaller posterior parietal P3 may indicate active inhibitory processes during cognitive strategies in hypnotic analgesia. These inhibitory processes are also believed to regulate
the autonomic activities in pain perception. Address for reprints: Dr. V. De Pascalis, Department of Psychology, University of Rome ‘La Sapienza’, Via dei Marsi 78, 00185, Rome, Italy. E-mail: v.depascalis@caspur.it

Friederich, M., Trippe, R. H., Ozcan, M., Weiss, T., Hecht, H., & Miltner, W. H. (2001). Laser-evoked potentials to noxious stimulation during hypnotic analgesia and distraction of attention suggest different brain mechanisms of pain control. *Psychophysiology, 38*(5), 768-776. Sociocognitive theories of hypnosis have hypothesized that hypnotic pain relief is mediated through cognitive mechanisms such as distraction of attention. It has also been suggested that hypnosis simply represents an extensive state of reduced attention. These assumptions imply that reports of pain and electrocortical brain responses to painful stimulation should be similarly reduced when subjects are exposed to suggestions of hypnotic analgesia (HA) versus being requested to voluntarily distract their attention from painful stimuli (distraction of attention: DA), as compared to a control condition (CC). To evaluate this hypothesis, the authors recorded event-related electrical brain potentials to noxious laser-heat stimuli and pain reports during HA, DA, and CC from high hypnotizable subjects during hypnotic suggestions. Pain reports were significantly reduced during hypnotic analgesia and distraction as compared to CC. The amplitudes of the late laser-evoked brain potential (LEP) components N200 and P320 were also significantly smaller during DA than during CC. But, no significant difference of these late LEP amplitudes was obtained for HA as compared to CC. The results indicate that hypnotic analgesia and distraction of attention represent different mechanisms of pain control, involving different brain mechanisms. Address for reprints: Dr. M. Friederich, Department of Biological and Clinical Psychology, Institute of Psychology, Friedrich Schiller University of Jena, Germany.

Gruzelier, J., Smith, F., Nagy, A., & Henderson, D. (2001). Cellular and humoral immunity, mood and exam stress: The influences of self-hypnosis and personality predictors. *International Journal of Psychophysiology, 42*(1), 55-71. In this outstanding article, the effects of self-hypnosis training on immune function and mood were evaluated in medical students at exam time. The hypnosis focused on relaxation and imagery directed at improved immune function and increased energy, alertness and concentration. Hypotheses were made about activated and withdrawn personality differences. Eight high and eight low hypnotically susceptible subjects received 1 heterohypnosis session and 9 tape-recorded sessions, and were compared with 12 control subjects. CD3, CD4, CD8, CD19 and CD56 NK cells and blood cortisol were assayed. Life-style, activated vs. withdrawn temperament, anxiety, and arousal questionnaires were administered. Self-hypnosis buffered the decline found in controls in NK (P<0.002) and CD8 cells (P<0.0.07) and CD8/CD4% (P<0.06) (45-35% order of magnitude differences) while there was an increase in cortisol (P<0.05). The change in NK cell counts was positively correlated with changes in both CD8 cells and cortisol. The results were independent of changes in life-style. Energy ratings were higher following hypnosis (P<0.01), and increased calmness with hypnosis correlated with an increase in CD4 counts (P<0.01). The activated temperament, notably the cognitive subscale (speaking and thinking quickly), was predictive of exam levels of T and B lymphocytes (P<z.Lt;0.08-P<0.02), and reaching r = 0.72 (P<0.001) in the non-
intervention control group. The sizeable influences on cell-mediated immunity achieved by a relatively brief, low cost psychological intervention in the face of a compelling and yet routine stress in young, healthy adults have implications for illness prevention and for patients with compromised immunity. Address for reprints: Dr. John Gruzelier, Dept. of Cognitive Neuroscience and Behaviour, Imperial College Medical School, St. Dunstan’s Road, London W6 8RF, United Kingdom. E-mail: j.gruzelier@ic.ac.uk.

Hammond, D. C. (2001). Treatment of chronic fatigue with neurofeedback and self-hypnosis. *NeuroRehabilitation, 16*, 1-6. Initially, the literature on chronic fatigue is reviewed. This literature suggests that CFS with a gradual onset, associated with a prior history of psychiatric co-morbidities may more often represent somatization. However, CFS with a relatively rapid onset, without a history of psychiatric co-morbidities, appears more likely to be associated with abnormalities in brain function. A case of a 21-year-old woman with rapid onset CFS and cognitive impairments is presented. Quantitative EEG brain mapping revealed excessive left frontal theta brainwave activity which was congruent with neuroimaging research with CFS. She was treated with a combination of EEG biofeedback (neurofeedback) and self-hypnosis training. Both seemed to be important components in her improvement. Measures on the profile of Mood States pre-post treatment, and on 5, 7, and 9-month follow-ups revealed considerable improvement in fatigue, vigor, and confusion. Results were externally validated through interviews with parents. Address for reprints: Dr. D. Corydon Hammond, University Medical Center, PM&R, 30 North 1900 East, Salt Lake City, UT 84132-2119. E-mail: D.C.Hammond@m.cc.utah.edu.

Hippel, C. V., Hole, G., & Kaschka, W. P. (2001). Autonomic profile under hypnosis as assessed by heart rate variability and spectral analysis. *Pharmacopsychiatry, 34*(3), 111-113. Testing the hypothesis of a sympathovagal balance shift towards an enhanced vagal tone during standardized hypnosis, the authors used the assessment of heart rate variability, including spectral analysis, in 10 healthy subjects (5 female, 5 male, age ranging from 27 to 42 years). They compared the subjects under a resting baseline condition and under hypnosis, measured on a different day for five minutes in each condition. They found reduced total power in the low frequency band (0.01-0.05 Hz) reflecting sympathetic activity. Also, the ratio of low to high frequency power (LFIHF) was reduced in hypnosis. This reduction was due to a reduced LF component, but only a slightly reduced mid frequency component. With considerable variability, they also found activated mid-frequency bands (0.05-0.15Hz) under hypnosis, likely reflecting baroreceptor activity. They concluded that the autonomic status in hypnosis is associated with a change towards reduced low frequency activity, but not necessarily with enhanced high frequency activity. No address for reprints.

Hugdahl, K., Rosen, G., Ersland, L., Lundervold, A., Smievoll, A. I., Barndon, R., & Thomsen, T. (2001). Common pathways in mental imagery and pain perception: An fMRI study of a subject with an amputated arm. *Scandanavian Journal of Psychology, 42*(3), 269-275. This paper reviews data from two previous studies in this laboratory, as well as some additional new data, on the neuronal representation of movement and pain imagery in a subject with an amputated right arm. Although involving imagery rather than hypnosis, the findings are very relevant to hypnosis, pain problems, and to sports psychology, identifying that imagined activity activates...
the same brain centers involved with actual activity. The subject imagined painful and non-painful finger movements in the amputated stump while being in a MRI scanner, acquiring EPI-images for fMRI analysis. In the first study (Ersland et al., 1996) the subject alternated tapping with his intact left hand fingers and imagining “tapping” with the fingers of his amputated right arm. The results showed increased neuronal activation in the right motor cortex (precentral gyrus) when tapping with the fingers of the left hand, and a corresponding activation in the left motor cortex when imagining tapping with the fingers of the amputated right arm. The finger tappings of the intact left hand fingers also resulted in a larger activated precentral area than imagery “finger tapping” of the amputated right arm fingers. In Study II (Rosen et al., 2001 in press) the same subject imagined painful and pleasurable finger movements, and still positions of the fingers of the amputated arm. The results showed larger activations over the motor cortex for movement imagining versus imagining the hand being in a still position, and larger activations over the sensory cortex when imagining painful experiences. It was, therefore, concluded that not only does imagery activate the same motor areas as real finger movements, but also that adding instructions of pain together with imaging moving the fingers intensified the activation compared with adding instructions about non-painful experiences. From these studies, it is clear that areas activated during actual motor execution to a large extent also are activated during mental imagery of the same motor commands. In this respect the present studies add to studies of visual imagery that have shown a similar correspondence in activation between actual object perception and imagery of the same object.

Jackson, P. L., Lafleur, M. F., Malouin, F., Richards, C., & Doyon, J. (2001). Potential role of mental practice using motor imagery in neurologic rehabilitation. Archives of Physical Medicine & Rehabilitation, 82(8), 1133-1141. For many patients with damage to the central nervous system (CNS), execution of motor tasks is very difficult and sometimes impossible, even after an active rehabilitation program. Several investigators have recently proposed that mental practice might be used by these patients as a therapeutic tool to improve their performance of motor functions, but very little empirical work addresses this issue directly. This paper discusses the rationale for investigating mental practice as a means of promoting motor recovery in patients with a neurologic disorder, much as Milton H. Erickson did in his personal recovery from polio. The authors first present evidence supporting the existence of a similarity between executed and imagined actions using data from psychophysical, neurophysiologic, and brain imaging studies. They then extend this parallel to the repetition of movements during physical and mental practice of a motor skill. Finally, they propose a new model to emphasize the key role of motor imagery as an essential process of mental practice, and also to stimulate additional research on this type of training in the rehabilitation of patients with motor impairments of cerebral origin, such as head injury or stroke. It is the belief of this reviewer that this has even more relevance given the fact that one research study has found above average hypnotizability in head injury patients. Address for reprints: Dr. P. L. Jackson, Department of Psychology, Laval University, Quebec City, Canada.
Kiecolt-Glaser, J. K., Marucha, P. T., Atkinson, C., & Glaser, R. (2001). Hypnosis as a modulator of cellular immune dysregulation during acute stress. *Journal of Consulting & Clinical Psychology, 69*(4), 674-682. To evaluate the influence of a hypnotic intervention on cellular immune function during a commonplace stressful event, the authors selected 33 medical and dental students on the basis of hypnotic susceptibility. Initial blood samples were gathered during a lower stress period, with a second sample was drawn 3 days before the first major examination of the term. One-half of the subjects were randomly assigned to hypnotic-relaxation training in the interval between samples. Subjects in the hypnotic group were, on average, protected from the stress-related decrements that were observed in control participants’ proliferative responses to 2 mitogens, percentages of CD3+ and CD4+ T-lymphocytes, and interleukin 1 production by peripheral blood leukocytes. More frequent hypnotic-relaxation practice was associated with higher percentages of CD3+ and CD4+ T-lymphocytes. The results, along with those of Gruzelier et al. (reviewed above) provide encouraging evidence that interventions may reduce the immunological dysregulation associated with acute stressors. Address for reprints: Dr. J. K. Kiecolt-Glaser, Department of Psychiatry, Ohio State University College of Medicine, Columbus, OH 43210, USA. E-mail: kiecolt-glaser.1@osu.edu.

Krakow, B., Hollifield, M., Johnston, L., Koss, M., Schrader, R., Warner, T. D., Tandberg, D., Lauriello, J., McBride, L., Cutchen, L., Cheng, D., Emmons, S., Germain, A., Melendrez, D., Sandoval, D., Prince, H. (2001). Imagery rehearsal therapy for chronic nightmares in sexual assault survivors with posttraumatic stress disorder: A randomized controlled trial. *Journal of the American Medical Association, 286*(5), 537-545. Chronic nightmares often occur in patients with posttraumatic stress disorder (PTSD) but are not usually a primary target of treatment. The purpose of this study was to determine if treating chronic nightmares with imagery rehearsal therapy (IRT) would reduce the frequency of disturbing dreams, improves sleep quality, and decreases PTSD symptom severity. This was a randomized controlled trial conducted from 1995 to 1999 among 168 women in New Mexico; 95% had moderate-to-severe PTSD, 97% had experienced rape or other sexual assault, 77% reported life-threatening sexual assault, and 58% reported repeated exposure to sexual abuse in childhood or adolescence. Subjects were randomly assigned to treatment (n = 88) or to the wait-list control group (n = 80). The treatment group received 3 sessions of IRT; controls received no additional intervention, but continued any ongoing treatment. Patient scores on the Nightmare Frequency Questionnaire (NFQ), Pittsburgh Sleep Quality Index (PSQI), PTSD Symptom Scale (PSS), and Clinician-Administered PTSD Scale (CAPS) were done at 3- and 6-month follow-up. A total of 114 participants completed follow-up at 3 and/or 6 months. Comparing the baseline to follow-up measures, treatment significantly reduced nights per week with nightmares (Cohen d = 1.24; P<.001) and number of nightmares per week (Cohen d = 0.85; P<.001) on the NFQ, and improved sleep (on the PSQI, Cohen d = 0.67; P<.001) and PTSD symptoms (on the PSS, Cohen d = 1.00; P<.001 and on the CAPS, Cohen d = 1.53; P<.001). Control participants only displayed small, nonsignificant improvements for the same measures (mean Cohen d = 0.21). In a 3-point analysis, improvements occurred in the treatment group at 3-month follow-up (treatment vs control group, Cohen d = 1.15 vs 0.07 for nights per week with nightmares; 0.95 vs -0.06 for nightmares per week; 0.77
vs 0.31 on the PSQI, and 1.06 vs 0.31 on the PSS) and were sustained without further intervention or contact between 3 and 6 months. An intent-to-treat analysis (n = 168) confirmed there were significant differences between treatment and control groups for nightmares, sleep, and PTSD (all P<.02) with moderate effect sizes for treatment (mean Cohen d = 0.60) and small effect sizes for controls (mean Cohen d = 0.14). Posttraumatic stress symptoms decreased by at least 1 level of clinical severity in 65% of the treatment group compared with symptoms worsening or not changing in 69% of controls (chi(2)(1) = 12.80; P<.001). It was concluded that imagery rehearsal therapy (as we may do in hypnosis) is a brief, well-tolerated treatment that appears to decrease chronic nightmares, improve sleep quality, and decrease PTSD symptom severity. A web site about the IRT program (www.nightmaretreatment.com) may be of interest to our readers. Address for reprints: Dr. B. Krakow, Sleep & Human Health Institute, 4775 Indian School Rd NE, Suite 305, Albuquerque, NM 87110, USA. E-mail: bkrakow@salud.unm.edu.

Kwekkeboom, K. L. (2001). Outcome expectancy and success with cognitive-behavioral interventions: The case of guided imagery. Oncology Nursing Forum, 28(7), 1125-1132. This study examined the role of outcome expectancy in the use of guided imagery and to test three variables (history of imagery use, preferred coping style, and perceived credibility of the imagery provider) as predictors of outcome expectancy regarding guided imagery. A sample of 75 women undergoing surgery for gynecologic or breast cancers was collected at clinics in a large, midwestern university hospital. Data was collected as part of an ongoing trial of guided imagery, with participants completing measures of outcome expectancy and predictor variables at a preoperative clinic visit. Significant relationships were found between a previous history of imagery use and outcome expectancy r = 0.47, p <0.01) and between perceived credibility of the imagery provider and outcome expectancy r = 0.45, p < 0.05). Preferred coping style was not found to be related to outcome expectancy. A previous history of using imagery and the perceived credibility of the imagery provider were supported as predictors of outcome expectancy. Future research should reexamine the predictive role of preferred coping style. Patients’ previous use of guided imagery or hypnosis, and perceptions of credibility may be helpful in selecting appropriate strategies. Address for reprints: K. L. Kwekkeboom, College of Nursing, University of Iowa, Iowa City, IA 52240. USA. kristine-kwekkeboom@uiowa.edu

LeBaron, S., Fanurik, D., & Zeltzer, L. K. (2001). The hypnotic dreams of healthy children and children with cancer: A quantitative and qualitative analysis. International Journal of Clinical & Experimental Hypnosis, 49(4), 305-319. The Stanford Hypnotic Clinical Scale for Children was given to 52 healthy and 47 children or adolescents with cancer. Dream item responses were then analyzed for type and detail of imagery. Hypnotizability of both groups was similar. But, the children with cancer had more pleasant than unpleasant fantasy in their hypnotic dreams, and their dreams contained less fantasy and detail. When the dream item was rescored based on the extent of fantasy and detail, there was a lower pass rate, particularly for children with cancer. Older children, regardless of health status, displayed more self-involvement in their hypnotic dreams compared with younger children. Address for reprints: Dr. Samuel LeBaron, Division of Family & Community Medicine, Stanford
Mallard, D., & Bryant, R. A. (2001). Hypnotic color blindness and performance on the Stroop test. *International Journal of Clinical & Experimental Hypnosis, 49*(4), 330-338. Hypnotic suggestions for color blindness were evaluated by administering a reverse Stroop color-naming task. Before the suggestion for color blindness, subjects learned associations between color names and shapes. After color blindness was suggested, subjects had to name the shapes when they appeared in colors that were either congruent or incongruent with the associations they had learned. The high hypnotizable subjects who passed the suggestion were slower to name (1) the shapes in which the color name was incongruent with the color that it was printed in, (2) “unseen” rather than “seen” shapes, and (3) color-incongruent shapes that were printed in the color for which they were “color blind.” The potential cognitive and social mechanisms mediating responses to hypnotic color blindness were discussed. Address for reprints: Dr. Richard A. Bryant, School of Psychology, University of New South Wales, NSW 2052, Australia. E-mail: r.bryant@unsw.edu.au.

Nash, M. R. (2001). The truth and hype of hypnosis. *Scientific American, 285*, 46-55. Begins by identifying misconceptions about hypnosis and summarizing methodological developments in hypnosis research. Classic studies in the field are described, and more recent research using PET scans are also elaborated. Included are cautions about hypnosis and memory. Finally, descriptions of clinical applications of hypnosis are presented. No address available for reprints.

Nilsson, U., Rawal, N., Unestahl, L. E., Zetterberg, C., & Unosson, M. (2001). Improved recovery after music and therapeutic suggestions during general anesthesia: A double-blind randomized controlled trial. *Acta Anaesthesiologia Scandinavica, 45*(7), 812-817. This study was designed to determine whether music or music along with therapeutic suggestions in the intra-operative period under general anesthesia could improve the recovery of hysterectomy patients. In a double-blind, randomized study, 90 patients undergoing hysterectomy with general anesthesia were intra-operatively exposed to music, music in combination with therapeutic suggestion, or operation room sounds. The anesthesia was standardized and postoperative analgesia was provided by a patient-controlled analgesia (PCA) unit. Pain scores were rated on a visual analogue scale. Nausea, emesis, bowel function, fatigue, well-being, and duration of hospital stay were also evaluated. On the day of surgery, patients exposed to music in combination with therapeutic suggestions required less rescue analgesic compared with the controls. Patients in the music group experienced more effective analgesia the first day after surgery and could be mobilized earlier after surgery. At the time of hospital discharge, patients in the music and music combined with therapeutic suggestion group were less fatigued compared to the controls. No differences were noted in nausea, emesis, bowel function, well-being or length of hospital stay between the groups. This double-blind study demonstrated that intra-operative music and music in combination with therapeutic suggestions may have some beneficial effects on postoperative recovery after hysterectomy. Further controlled studies are needed. Address for reprints: Dr.
Page, S. J., Levine, P., Sisto, S. A., & Johnston, M. V. (2001). Mental practice combined with physical practice for upper-limb motor deficit in subacute stroke. *Physical Therapy, 81*(8), 1455-1462. A case report describing a 56-year old patient with upper-limb hemiparesis (ULH) who received a program combining physical therapy for the affected side with mental practice. The patient had stable motor deficits, including ULH, on his dominant side resulting from a right parietal infarct that occurred 5 months previously. He received physical therapy for an hour 3 times a week for 6 weeks. In addition, twice a week the patient listened to an audiotape instructing him to imagine himself functionally using the affected limb. The patient was also instructed to listen to the audiotape at home twice a week. Pretreatment and posttreatment measures consisted of the upper-extremity scale of the Fugl-Meyer Assessment of Sensorimotor Impairment (Fugl-Meyer Scale), the Action Research Arm Test (ARA), and the Stroke Rehabilitation Assessment of Movement (STREAM). The patient exhibited reduction in impairment (Fugl-Meyer Scale) and improvement in arm function, as measured by the ARA and STREAM. It was concluded that mental practice may complement physical therapy to improve motor function following stroke. Address for reprints: Dr. Steve Page, Outcomes Research Department, Kessler Medical Research and Education Corporation, 1199 Pleasant Valley Way, West Orange, NJ 07051, USA. E-mail: spage@kmrrec.org.

Spiegel, S. B., & Kahn, S. (2001). Being “the other therapist”: The varieties of adjunctive experience with hypnosis. *International Journal of Clinical & Experimental Hypnosis, 49*(4), 339-351. Hypnotherapists are often approached with requests to participate in-patient care of someone already seeing a primary therapist. A literature review found no research on this practice. This paper discusses some of the important issues and variables to consider in deciding if one should enter into such a relationship, including: nature of the referral (e.g., hidden agendas); suggestibility, expectancy and motivations of the patient; therapist variables (e.g., collaborative relationship with the referring therapist to avoid splitting); and nature of the clinical problem (e.g., circumscribed vs. diffuse). Seven interesting cases are discussed in relation to these issues, definitions of roles, and unforeseen complexities than can emerge in doing adjunctive therapy with hypnosis. Address for reprints: Dr. Sharon Spiegel, 8717 Hempstead Ave., Bethesda, MD 20817, USA.

Zachariae, R., Jorgensen, M. M., Egekvist, H., & Bjerring, P. (2001). Skin reactions to histamine of healthy subjects after hypnotically induced emotions of sadness, anger, and happiness. *Allergy, 56*(8), 734-740. Severity of symptoms in asthma and other hypersensitivity-related disorders has been associated with changes in mood. However, little is known about the mechanisms possibly mediating such a relationship. This study examined the influence of mood on skin reactivity to histamine by comparing the effects of hypnotically induced emotions on flare and wheal reactions to cutaneous histamine prick tests. Fifteen high hypnotizable volunteers had their cutaneous reactivity to histamine measured before hypnosis at 1, 2, 3, 4, 5, 10, and 15 min after the histamine prick. The measurements were repeated under three hypnotically induced emotions of sadness, anger, and happiness, presented in a
counterbalanced order. Skin reactions were measured as change in histamine flare and wheal area in mm² per minute. The increase in flare reaction in the time interval from 1 to 3 min during happiness and anger was found to be significantly smaller than flare reactions during sadness (P<0.05). No effect of emotion was found for wheal reactions. Hypnotizability scores were associated with increased flare reactions at baseline (r=0.56; P<0.05) and during the condition of happiness (r=0.56; P<0.05). These results agree with previous studies showing mood to be a predictor of cutaneous immediate-type hypersensitivity and histamine skin reactions. The results are also congruent with earlier findings of an association between hypnotic susceptibility and increased reactivity to an allergen, in partial support of Ian Wickramasekera’s theory of high risk/threat perception and somatization. Address for reprints: Dr. R. Zachariae, Psycho-oncology Research Unit, Aarhus University Hospital, Aarhus, Department of Dermatology, Aarhus University Hospital, Aarhus, Denmark.