

**ARCHIVES OF GENERAL PSYCHIATRY**

**Naltrexone in the Treatment of Alcohol Dependence**

**S**eventy male alcohol-dependent patients participated in a 12-week, double-blind, placebo-controlled trial of naltrexone hydrochloride (50 mg/d) as an adjunct to treatment following alcohol detoxification. Subjects taking naltrexone reported significantly less alcohol craving and days in which any alcohol was consumed. During the 12-week study, only 23% of the naltrexone-treated subjects met the criteria for a relapse, whereas 54.3% of the placebo-treated subjects relapsed. The primary effect of naltrexone was seen in patients who drank any alcohol while attending outpatient treatment. Nineteen (95%) of the 20 placebo-treated patients relapsed after they sampled alcohol, while only eight (50%) of 16 naltrexone-treated patients exposed to alcohol met relapse criteria. Naltrexone was not associated with mood changes or other psychiatric symptoms. Significant side effects (nausea) occurred in two naltrexone-treated subjects, and one naltrexone-treated subject complained of increased pain from arthritis. These results suggest that naltrexone may be a safe and effective adjunct to treatment in alcohol-dependent subjects, particularly in preventing alcohol relapse.

(1992;49:876-880) Joseph R. Volpicelli et al, *Treatment Research Center, 3900 Chestnut St, Philadelphia, PA 19104.*

**Regional Cerebral Blood Flow in Monozygotic Twins Discordant and Concordant for Schizophrenia**

**W**e addressed several questions regarding hypofunction of the prefrontal cortex ("hypofrontality") in schizophrenia by measuring regional cerebral blood flow during three different cognitive conditions in monozygotic twins who were discordant or concordant for schizophrenia or who were both normal. These questions included the prevalence of hypofrontality, the importance of genetic predisposition, and the role of long-term neuro-

leptic treatment. Significant differences between affected and unaffected discordant twins were found only during a task linked to the prefrontal cortex, the Wisconsin Card Sorting Test. During this condition, all of the twins with schizophrenia were hypofrontal compared with their unaffected co-twins, suggesting that, if appropriate cognitive conditions and control groups are used, hypofrontality can be demonstrated in the majority of, if not all, patients with schizophrenia. When unaffected co-twins of patients with schizophrenia were compared with twins who were both normal, no differences were observed, suggesting that nongenetic factors are important in the cause of the prefrontal physiologic deficit that appears to characterize schizophrenia. When concordant twins with a high- vs low-dose lifetime history of neuroleptic treatment were compared, the twin receiving the higher dose was more hyperfrontal in six of eight pairs, suggesting that long-term neuroleptic treatment does not play a major role in hypofrontality.

(1992;49:927-934) Karen Faith Berman et al, *Clinical Brain Disorders Branch, Intramural Research Program, National Institute of Mental Health, NIMH Neuroscience Center at St Elizabeth's, 2700 Martin Luther King Jr Ave, Washington, DC 20032.*

**ARCHIVES OF NEUROLOGY**

**Dose Ranging Efficacy and Safety of Subcutaneous Sumatriptan in the Acute Treatment of Migraine**

**S**umatriptan, a specific serotonin<sub>1</sub>-like receptor agonist, was studied in the acute treatment of migraine. Two hundred forty-two adult migraineurs participated in a randomized, double-blind study in which one dose of 1, 2, 3, 4, 6, or 8 mg of subcutaneous sumatriptan succinate was evaluated in sequential ascending fashion. At each dose level, a placebo group was included. Efficacy was defined as reduction of moderate or severe pain to mild or no pain, without the use of rescue medication. Headache relief rates showed an approximate dose-response relationship and at 1 hour were as follows: placebo, 24%; 1 mg, 43%; 2 mg, 57%; 3 mg, 57%; 4 mg, 50%; 6 mg,

73%; and 8 mg, 80%. Relief of nausea and improvement in clinical disability were also approximately dose related. Adverse events were dose related; the most common types were injection site reactions and tingling. The 6-mg dose was as effective as the 8-mg dose but was associated with fewer adverse effects and so is optimal.

(1992;49:1271-1276) Ninan T. Mathew et al, *The Houston Headache Clinic, 1213 Hermann Dr, Houston, TX 77704.*

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### Effects of Cigarette Smoking on Motor Functions in Patients With Multiple Sclerosis

**T**he acute effects of cigarette smoking on motor functions were examined in 21 patients with multiple sclerosis and 11 healthy control subjects. The motor function in the upper extremities was assessed by a simple test battery. Sixteen of 21 patients had a transient deterioration of their motor function immediately after smoking, lasting for 10 minutes. The mean decrease in motor performance score for all 21 patients was 14%. With the same tests performed without smoking only three of 14 patients had a deterioration and the group had a mean 8% improvement. The control group showed a steady improvement over time, both in smoking and in simulation experiments. We conclude that nicotine causes a transient worsening of motor functions in patients with multiple sclerosis, which can be due to its effects on the central nervous system or vegetative-vascular functions.

(1992;49:1243-1247) Murat Emre and Catherine de Decker. Reprint requests to Dr Emre, Clinical Research, CNS Department, Sandoz Pharma Ltd, 4002 Basel, Switzerland.

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### ARCHIVES OF SURGERY

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#### Lung Resection for Colorectal Metastases: 10-Year Results

**Background:** Metastasectomy for colorectal carcinoma to the lung is controversial. We analyzed results of this approach to justify its credibility.

**Methods:** We studied 144 patients by retrospective review after complete resection of lung metastases from colorectal cancer from 1965 through 1988. Patient selection and prognostic factors influencing survival were analyzed. Survival was analyzed by the Kaplan-Meier method, and comparisons were made by log-rank analysis.

**Results:** A total of 170 thoracotomies were performed in 144 patients. The overall 5- and 10-year survival was 40%

and 30%, respectively. Those patients undergoing complete resection of their metastases survived significantly longer than those undergoing incomplete resections.

**Conclusion:** It appears that resection of pulmonary metastases from colorectal carcinoma translates into long-term survival benefit.

(1992;127:1403-1406) Patricia M. McCormack et al, *Memorial Sloan-Kettering Cancer Center, 1275 York Ave, New York, NY 10021.*

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### ARCHIVES OF INTERNAL MEDICINE

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#### Cholesterol-Lowering Effects of Calcium Carbonate in Patients With Mild to Moderate Hypercholesterolemia

**Background:** In recent years, several authors have noted that oral calcium treatment was associated with a reduction in serum cholesterol level.

**Methods:** Calcium carbonate was examined for its ability to lower serum cholesterol levels in hypercholesterolemic patients. Fifty-six patients with mild to moderate hypercholesterolemia were examined in this randomized, double-blind, placebo-controlled crossover study. Patients were treated with a low-fat, low-cholesterol diet targeted at the American Heart Association Step-1 diet for 8 weeks before and while receiving placebo or calcium carbonate (9.98 mmol [400 mg] of elemental calcium) three times daily with meals for 6 weeks. Patients were then crossed over to the alternate treatment for an additional 6-week period.

**Results:** Compared with placebo, calcium carbonate achieved a 4.4% reduction in the low-density lipoprotein cholesterol level, and a 4.1% increase in the high-density lipoprotein cholesterol level. The ratio of low-density lipoprotein cholesterol to high-density lipoprotein cholesterol significantly decreased by 6.5% with calcium carbonate treatment. Calcium carbonate treatment did not significantly affect blood pressure or serum levels of triglycerides, lipoprotein Apo B, or calcium. Relative urinary saturation ratios of calcium oxalate levels were unchanged during calcium carbonate therapy. Compliance with diet and treatment was excellent and no significant adverse effects were noted.

**Conclusions:** Thus, calcium carbonate was a modestly effective and well-tolerated adjunct to diet in the management of mild to moderate hypercholesterolemia in this clinical study.

(1992;152:2441-2444) Larry Bell et al. Reprint requests to Dr William F. Keane, The Drug Evaluation Unit, Hennepin County Medical Center, 701 Park Ave, Minneapolis, MN 55415.

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## Frequent Hypoglycemic Episodes in the Treatment of Patients With Diabetic Ketoacidosis

**Background:** Previous studies of the management of diabetic ketoacidosis have noted a wide range of incidence of hypoglycemia but have not studied the risk factors associated with it.

**Methods:** To describe the incidence of hypoglycemia in patients hospitalized with diabetic ketoacidosis, we retrospectively reviewed the charts of all adult patients with the diagnosis of diabetic ketoacidosis at three private, community hospitals in Milwaukee, Wis, between January 1, 1987, and May 31, 1990. Two hundred twenty admissions in 150 patients met our inclusion criteria.

**Results:** In 30% (66/220) of cases of diabetic ketoacidosis, a serum glucose level or Accu-Chek (Boehringer-Mannheim, Indianapolis, Ind) finding was 2.7 mmol/L or less during the first 14 days of hospitalization. No factors could be identified that were associated with a significantly increased risk of early hypoglycemia (within the first 48 hours of admission). The risk of a "late" occurrence of hypoglycemia (after 48 hours of hospitalization) was increased by fever (relative risk, 2.05; 95% confidence interval [CI], 1.16 to 3.63), "nothing orally" status (relative risk, 3.01; 95% CI, 1.88 to 4.83), hepatic disease (relative risk, 2.56; 95% CI, 1.39 to 4.70), and renal disease (relative risk, 2.07; 95% CI, 1.26 to 3.39). A logistic regression analysis showed "nothing orally" status to be associated with an increased risk of any hypoglycemia occurring during the hospitalization (relative risk, 2.39; 95% CI, 1.63 to 3.51). Physicians and nurses documented the first episode of hypoglycemia in their notes 45.5% and 80.3% of the time, respectively.

**Conclusion:** Hypoglycemia is still a common complication of diabetic ketoacidosis, is associated with hepatic and renal disease as well as fever and "nothing orally" status, and is not documented well in physician notes.

(1992;152:2472-2477) Michael L. Malone et al, Geriatrics Institute, Sinai Samaritan Medical Center, 950 N 12th St, Milwaukee, WI 53201.