mcg/mL Despite treatment with fosphenytoin (500 and 1000 mg), seizures recurred and the level of serum phenytoin was unchanged (4.8 mcg/mL). After reduction of folic acid to 1 mg/day, all seizure activity was controlled by the maintenance 300 mg dose of phenytoin, and serum levels increased to 17.6 and 11.3 mcg/mL. (Steinweg DL, Bentley ML. Seizures following reduction in phenytoin level after orally administered folic acid. **Neurology** (June (1 of 2) 2005;64:1982). (Reprints: Dr Donald L Steinweg, Carilion Roanoke Memorial Hospital, PO Box 13367, Roanoke, VA 24033).

COMMENT. This case report underscores the risks of adding folic acid to the drug regimen of patients with epilepsy treated with phenytoin. Folic acid appears to be a cofactor in the metabolism of phenytoin. The initial dose of folic acid should be small, and the dose of phenytoin should be increased to maintain therapeutic levels.

Phenytoin pharmacokinetics before and after folic acid administration were reported from University of Iowa (Berg MJ et al. **Epilepsia** 1992;33:712-720; see **Ped Neur Briefs** Sept 1992). All subjects showed decreased serum folic acid following initiation of phenytoin treatment. Folate and phenytoin are interdependent. In an earlier report (Baylis EM et al. Influence of folic acid on blood-phenytoin levels. **Lancet** 1971;297:62-64), phenytoin levels fell significantly during folic acid therapy, with recurrence of seizures in one case.

ATTENTION DEFICIT DISORDERS

IMMEDIATE EFFECTS OF METHYLPHENIDATE ON COGNITION

The immediate effects of methylphenidate on cognitive attention in 15 children (13 males, 2 females; mean age 9y 5m) with attention deficit hyperactivity disorder (ADHD) were assessed at Guy's Hospital, Great Ormond Street Children's Hospital, and Institute of Child Health, University College, London. All subjects were of average intelligence, but they demonstrated significant impairments in cognitive attention, especially sustained attention, at base-line, in comparison with a control group. Significant improvements in attention were measured in the ADHD children compared to untreated controls, when retested on the same day and after receiving methylphenidate in a single 10 mg dose. (Hood J, Baird G, Rankin PM, Isaacs E. Immediate effects of methylphenidate on cognitive attention skills of children with attention-deficit-hyperactivity disorder. **Dev Med Child Neurol** June 2005;47:408-414). (Respond: Jane Hood, Newcomen Centre, Guy's Hospital, St Thomas Street, London SE1 9RT, UK).

COMMENT. Is the cognitive improvement following a single dose of methylphenidate (MPH) predictive of a beneficial long-term response? The clinical judgment of severity of ADHD and improvement in Conners Rating Scales after a single dose of MPH (10 mg) were predictive of cross-situational improvement after 4 weeks of MPH treatment (Buitelaar JK et al. **J Am Acad Child Adolesc Psychiatry** 1995;34:1025-1032; **Ped Neur Briefs** Aug 1995). High IQ, young age, and low rates of comorbid anxiety were additional predictors of a long-term response.

The acute effects of MPH in 3 dosages (0.3, 0.6, and 0.9 mg/kg) on the performance of 17 ADHD children included increased cognitive flexibility and improved persistence (Douglas VI et al. **J Am Acad Child Adolesc Psychiatry** 1995;34:877-885; **Ped Neur**

Briefs July 1995). Doses of 0.3 to 0.6 mg/kg were recommended in clinical practice, larger doses having little advantage and causing possible impairment of cognitive functioning with multiple daily doses.

TREATMENT-CONTINUITY OF ADHD COMPARED USING IMMEDIATE-RELEASE AND EXTENDED-RELEASE MPH

The continuity of methylphenidate (MPH) therapy for ADHD in young Medicaid beneficiaries (ages 6 to 17 years) treated with immediate-release (IR) or extended-release (ER) MPH formulations was compared in an analysis of statewide California Medicaid claims (2000-2003) conducted at Columbia University, New York; University of Pennsylvania, Philadelphia; and McNeil Pharmaceuticals, Fort Washington, PA. Compared to IR-MPH treatment, patients initiating ER-MPH had a significantly longer mean duration of treatment (140.3 days vs 103.4 days). Controlling for group differences in age, sex, and other factors, ER-MPH-treated patients had an average 37% longer duration of treatment than those receiving IR-MPH. Comparing ER-MPH preparations, Concerta treatment was continued longer than Metadate CD or Ritalin LA (147.2, 113.0, and 101.1 days, respectively). (Marcus SC, Wan GJ, Kemner JE, Olfson M. Continuity of methylphenidate treatment for attention-deficit/hyperactivity disorder. **Arch Pediatr Adolesc Med** June 2005;159:572-578). (Respond: Mark Olfson MD MPH, New York State Psychiatric Institute/Department of Psychiatry, College of Physicians and Surgeons of Columbia University, 1051 Riverside Dr, New York, NY 10032).

COMMENT. In the above population, ER-MPH formulations for the treatment of ADHD were associated with longer treatment continuity than IR-MPH. Hispanic and African American Youth and adolescents were more likely to discontinue treatment early than other ethnic groups and younger children. Overall, less than one half of the patients continued MPH therapy beyond 90 days and less than 20% continued for 1 year. Long-acting MPH preparations appear to prolong compliance and continuity of therapy, and treatment with Concerta (12 hour duration of action) is maintained longer than Ritalin LA that is effective for only 8 hours.

In addition to duration of action, factors important in continuity of therapy include efficacy and toxicity of medication, educational accommodations, counseling, frequency of return visits and availability of professional consultation, and cultural bias. When therapy is interrupted at weekends and during vacation periods, and medication is used as an aid to education during school term, the overall duration of therapy is frequently extended through childhood and into adolescence, depending on the response and need.

In an overview and analysis of the current literature on the treatment of ADHD, the AAP Committee on Quality Improvement, Subcommittee on ADHD concluded that: 1) ADHD should be managed as a chronic condition; 2) the use of stimulant medications is beneficial and that stimulants are equally effective; 3) behavioral therapy is minimally effective but only in combination with medication; and 4) education and counseling of patient and family are necessary adjuncts to drug therapy. (Brown RT et al. **Pediatrics** June 2005;115:e749-e757).