scoring below average in math for iron deficient children was greater than twice that in children with normal iron values. This increased risk was present in both iron-deficient children with or without anemia. (Halterman JS, Kaczorowski JM, Aligne CA, et al. Iron deficiency and cognitive achievement among school-aged children and adolescents in the United States. Pediatrics June 2001;107:1381-1386). (Reprints: Jill S Halterman MD, University of Rochester School of Medicine, 777 Strong Memorial Hospital, 601 Elmwood Ave, Rochester, NY 14642).

COMMENT. Iron-deficiency, with or without anemia, in school-aged children and adolescents is associated with lower scores on standardized math tests. The prevalence of iron deficiency is highest in adolescent girls, reaching 8.7% in a nationally US representative sample. Screening for iron deficiency should be considered in children with learning and behavior problems, even in those without anemia. A few previous studies have demonstrated adverse effects of anemia on cognitive performance, and variable effects of iron therapy on learning and memory. In future prospective studies, measures of iron status in relation to cognitive test scores appear to be more significant than hemoglobin values.

Reversible focal neurologic deficits were reported in a 14-year-old black female adolescent treated at Duke University Medical Center (Bruggers CS et al. J Pediatr 1990;117:430-432; see Progress in Pediatric Neurology I, PNB Publishers, 1991;pp397-8). After transfusion and treatment with ferrous sulfate, a facial palsy resolved in 12 hours and a VI nerve palsy and somnolence resolved by the fifth day. Despite continued bleeding from hereditary telangiectasia, the neurologic exam remained normal while supplemental iron and a normal hemoglobin were maintained. See Ped Neur Briefs (May 1997;11:33-34) for further reference to iron deficiency and learning disorders.

SEIZURE DISORDERS

MORTALITY RISK IN CHILDREN WITH EPILEPSY

The mortality in a cohort of 472 children (aged 1 month to 16 years) with epilepsy, newly diagnosed between 1988 and 1992, was compared in a multicenter study with that in the same age group in the general population in the Netherlands. All children were followed for 5 years or until death. Nine children died, and the mortality rate was 3.8/1000 person-years, seven times higher than expected. Death occurred only among children with epilepsy caused by a static or progressive neurologic disorder (6 with neonatal encephalopathy, 3 progressive disorder, 1 Niemann-Pick C, 1 ependymoma, and 1 infantile ceroid lipofuscinosis). None had a sudden unexpected and unexplained death from epilepsy. No mortality occurred among 328 children with epilepsy of nonsymptyomatic cause. In those with symptomatic epilepsy, the mortality risk was 22.9 vs 0.39 expected. (Callenbach PMC, Westendorp RGJ, Geerts AT et al. Mortality risk in children with epilepsy: The Dutch study of epilepsy in childhood. Pediatrics June 2001;107:1259-1263). (Reprints: Oebele F Brouwer MD PhD, Department of Neurology, University Hospital Groningen, Box 30001, 9700 RB Groningen, The Netherlands).

COMMENT. Compared to the general pediatric population in the Netherlands, the risk of mortality in childhood epilepsy is not increased for nonsymptomatic cases but reaches a 20-fold increase in children with symptomatic epilepsy. Among the 9 deaths in this prospective study, none was sudden unexpected and unexplained (SUDEP). An accurate initial diagnosis is important in counseling

parents regarding risks of mortality in epilepsy.

Dr Neil Gordon, Wilmslow, Cheshire, UK, reviews SUDEP in the May issue of Dev Med Child Neurol 2001;43:354-357. In SUDEP, by definition, death is not the immediate result of a seizure or status epilepticus. In one report (Nilsson et al. Lancet 1999;353:888-893), 91% of 57 with SUDEP had undergone autopsies; risk of SUDEP was not increased in patients with symptomatic as opposed to idiopathic epilepsy. Risk factors included early-onset epilepsy, poor seizure control, polytherapy with AEDs, and frequent dose adjustments or abrupt AED withdrawal. Causes of SUDEP are usually multiple. Difficulties in establishing cause using data from death certificates is stressed by Appleton RE. (Seizure 1997;6:175-177) who reported findings in 60 children with SUDEP.

In a study reviewed in Ped Neur Briefs (March 2001;15:24), the mortality rate of children in antiepileptic drug trials was 4.1 per 1000 person years, and the SUDEP rate was 2.4/1000 person years. Only age was associated with the risk of SUDEP, and disease severity is the probable determining factor. Length of epilepsy history, gender, and number of concomitant drugs do not influence the SUDEP rate (Racoosin JA et al. Neurology 2001;56:514-519). Also, see Walczak TS et al. Neurology 2001;56:519-525, for further recent SUDEP study.

DURATION OF NEW-ONSET SEIZURES

Seizure duration was determined in a prospective study of 407 children with a first unprovoked seizure treated at the Epilepsy Management Center, Montefiore Medical Center, Bronx, NY. Analysis of medical and ambulance records and structured interview showed that 50% of seizures were >5 minutes duration, >10 min in 29% of cases, >20 min in 16%, and >30 min in 12%. Children were not taking antiepileptic drugs at the time of the seizure, and except in some with status epilepticus, the seizure stopped spontaneously. Two groups of patients were defined, one with a mean of 3.6 minutes, short duration seizures (76% of cases) and the other with a mean duration of 31 minutes (24%) and a predisposition to prolonged seizures. Seizures were less likely to stop spontaneously if they lasted longer than 5-10 minutes. In patients with 2 or more seizures (182), the duration of first and second seizures were highly correlated (P<.0001). Intervention AED therapy is indicated once a seizure lasts for >5-10 minutes. The definition of status epilepticus as a seizure lasting for 30 minutes or longer appears to be supported. (Shinnar S, Berg AT, Moshe SL, Shinnar R. How long do new-onset seizures in children last? Ann Neurol May 2001;49:659-664). (Respond: Dr Shinnar, Epilepsy Management Center, Montefiore Medical Center, 111 E 210th Street, Bronx, NY 10467).

COMMENT. Seizures lasting >30 minutes are not infrequent in children with a first unprovoked untreated seizure. Spontaneous remission is unlikely when a seizure is allowed to continue for more than 5-10 minutes. The authors recommend treatment after a seizure has lasted for 5-10 minutes. In fact, since treatment is less effective the longer a seizure lasts, why wait to treat?

The prevalence of long duration seizures among patients monitored with refractory partial epilepsy is lower than in those with first unprovoked attacks. Most secondarily generalized tonic-clonic seizures last for <2 min and those >5 min are infrequent. These observations have suggested a need for possible revision of the definition of status epilepticus to a seizure lasting =/>5 minutes (Lowenstein DH et al. Epilepsia 1999;40:120-122). Shinnar and colleagues favor the current definition (a seizure lasting =/> 30 min), except perhaps for refractory localization-related epilepsies.