

ingredients most commonly associated with food intolerance (milk, egg, wheat, soya bean, cocoa, BHA and BHT, sulfur dioxide, benzoate, glutamate and azo colours).

SUGAR, ASPARTAME AND BEHAVIOR

The effects of glucose, sucrose, saccharin, and aspartame on aggression and motor activity in 30 boys, ages 2-6 years, were studied at the Child Psychiatry Branch and Laboratory of Developmental Psychology, NIMH, Bethesda, MD. Eighteen boys were recruited or selected as "sugar responders" and 12 male playmates were "non responders". Single doses of sucrose, 1.75g/kg; glucose, 1.75g/kg; aspartame, 30mg/kg; or saccharine administered in a randomized, double-blind design produced no significant effect on aggression or on teacher ratings of behavior. Actometer counts for 2 hours after ingestion of aspartame were lower than those following other sweeteners. Parent ratings of activity and aggression after home challenges with sweeteners failed to show differences between substances for either the alleged "responders" or "non responders". Consistent with baseline measures, parents rated responders more hyperactive than playmates who were not believed to be sugar reactive. No parent differentiated between sugar and nonsugar trials. Mean daily sucrose intake and total sugar consumption correlated with duration of aggression against property for the alleged sugar responsive group but acute sugar loading did not increase aggression or activity in preschool children. (Krnesi MJP et al. Effects of sugar and aspartame on aggression and activity in children. Am J Psychiatry 1987;144:1487-1490).

COMMENT. Connors CK at the Children's Hospital, Washington, D.C. reports that deleterious effects of sugar on children with attention deficit may be demonstrated if the challenge follows a high carbohydrate breakfast but the effects are blocked or reversed by a protein load. The beneficial and protective effects of a protein diet are correlated with neuroendocrine changes and the prevention of the serotonergic effects of sugar on behavior and attention (personal communication and in Diet and Behavior, Lubbock, Texas Tech Univ Press). Diets low in protein and high in carbohydrates might be expected to cause increases in spontaneous activity, as demonstrated in animal studies, but these effects are not necessarily related to swings in blood sugar concentrations. For recent reviews of the effects of dietary nutrients and deficiencies on brain biochemistry and behavior see Yehuda S. Intern J Neuroscience 1987;35:21-36; and Nutrition Reviews/Supplement May 1986;44:1-250.

PAROXYSMAL DISORDERS

HEMISPHERECTOMY FOR CHILDHOOD EPILEPSY

Seventeen patients treated for hemiplegic epilepsy by hemispherectomy between 1950 and the present day have been followed up at the National Centre for Children with Epilepsy, The Park Hospital for Children, Oxford. The causes of the seizures were associated with perinatal complications in 8 and early febrile status epilepticus, prolonged and unilateral, in 9. Two of the 17 had congenital abnormalities: Sturge-Weber disease in one and a heterotopia found at operation in the other. Habitual seizures began at age 1 to 10 yrs after an interval of relative freedom varying

from 8 mos to 10 yrs. Gross behavior disorder was a major handicap, schooling was interrupted, and intelligence deteriorated in the years before operation. EEG was of limited value, both hemispheres often being involved. High-voltage discharges occurred in the preserved hemisphere. The median age at operation was 11½ yrs (7-17 yrs). Follow-up ranged from 1-36 yrs.

Post-operatively, (1) habitual epilepsy was interrupted with complete freedom in 11 (65%); (2) behavior improved, sometimes dramatically; (3) drop in IQ was halted; (4) the residual homonymous hemianopia was not a major handicap; and (5) one patient developed hemisiderosis of the postoperative cavity and died 11 years after operation.

The authors make the following recommendations: (1) establish that the lesion is unilateral and medication has been tried fully, (2) weigh dangers of status epilepticus, escalating behavior disorder, and deterioration of IQ when operation is delayed compared to benefits and low risks of early surgery; (3) use improved operative techniques with dissection of cortex in single piece (Falconer and Rushworth) and reconstruction and closure of cavity (Adams), and (4) regular follow-up with CT scans. (Lindsay J, Ounsted C, Richards P. Hemispherectomy for childhood epilepsy: A 36-year study. Dev Med Child Neurol 1987;29:592-600).

COMMENT. These authors have found hemispherectomy to be of considerable benefit to children with hemiplegic epilepsy and its concomitant social, psychological and medical disabilities. The surgical treatment of intractable epilepsy offers an alternative to chronic anticonvulsant drugs with their attendant adverse effects. With improved techniques now available the surgical approach should be considered more frequently in preference to a dogged persistence and reliance on medicines alone. (Ped Neur Briefs 1987;1:24).

INFANTILE SPASMS AND ACTH DOSAGE

Results of corticotropin treatment of 33 patients with infantile spasms are reported from the Istituto Clinica Pediatrica, Università di Siena, Italy. The etiology was undetermined in 8 and secondary in 25 (pre- or perinatal distress in 17 and tuberous sclerosis in 2). Pyridoxine 300mg IV tried in all cases initially with EEG monitoring was without effect. ACTH 2 units/kg daily for 10 days followed by alternate day treatment for 10 days with a repeat course in some resulted in improvement in all idiopathic cases (complete in 6) and in 15 secondary cases (complete only in 2). The authors advocate low doses and short courses of ACTH, claiming results comparable with larger amounts (up to 10-12 u/kg/day) for longer periods (3 mos) employed by some. (Pois A et al. Further observations on the treatment of infantile spasms with corticotropin. Brain Dev 1987;9:82-84. Ibid, Eur J Pediatr 1983;42:51).

COMMENT. The mechanism of the anticonvulsant action of ACTH in infantile spasms is unknown. It is probably independent of the adrenal (Neurology 1965;15:1136) and a possible direct CNS effect is a reason proposed for the use of high dosage schedules. In agreement with the present study, my own results with smaller doses, 10-20 units daily irrespective of body weight for 20 days, have equalled those reported with higher doses and longer courses, and serious side effects have been avoided.