Physical Activity, Cognitive Function in Older Adults

Epidemiologic evidence supports an association of regular physical activity with lower rates of cognitive decline. Sink and colleagues investigated this relationship in a clinical trial involving 1635 community-dwelling sedentary adults aged 70 to 89 years who were randomly assigned to a 24-month structured, moderate-intensity physical activity program or to a health education program. The authors report that compared with health education, the 24-month physical activity program did not result in improvements in global or domain-specific cognitive function. In an Editorial, Gill and Seitz discuss lifestyle factors and cognitive health.

Effect of Nutrient Supplementation on Cognitive Function

High dietary intake of omega-3 long-chain polyunsaturated fatty acids (LCPUFAs) and antioxidants has been associated with better cognitive performance in observational studies. Chew and colleagues assessed 5-year change in cognitive function test scores in 3073 participants in the Age-Related Eye Disease Study 2, who received varying combinations of vitamins C and E, beta-carotene, and zinc and were randomly assigned to receive LCPUFAs and lutein/zeaxanthin or placebo. The authors report that among older persons with age-related macular degeneration, LCPUFA and lutein/zeaxanthin supplements did not affect cognitive function.

Time to Epinephrine, Outcomes of Pediatric Cardiac Arrest

In an analysis of registry data from 1558 pediatric patients with an in-hospital cardiac arrest and an initial nonshockable rhythm, Andersen and colleagues assessed the relationship between the time to first epinephrine dose and patient outcomes. The authors found that delay in administration of epinephrine was associated with decreased survival to hospital discharge or survival with a favorable neurological outcome. In an Editorial, Tasker and Randolph discuss use of registry data to guide treatment of pediatric cardiac arrest.

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Genomic Analysis of Mutation Clearance and Prognosis in AML

In an analysis of whole genome or exome sequencing data from 71 samples obtained at disease presentation and 50 samples obtained after successful induction therapy from patients with de novo acute myelogenous leukemia (AML), Klco and colleagues found that genomic analysis of disease presentation samples did not identify novel biomarkers associated with prognosis. However, detection of persistent leukemia-associated mutations in day 30 remission samples was associated with relapse and reduced overall survival. In an Editorial, Pastore and Levine discuss molecular profiling to improve risk stratification for patients with AML.

Primary Care Prevention of Childhood Obesity

Summary results of a 2013 National Institutes of Health workshop, “Prevention of Obesity in Infancy and Early Childhood”—which addressed known factors and knowledge gaps related to excess weight gain in young children and the efficacy and challenges to implementation of preventive interventions—were recently published in JAMA Pediatrics. This From the JAMA Network article by Faith and colleagues discusses the role of primary care clinicians in research to prevent childhood obesity.

Prostate Cancer Screening

This JAMA Clinical Guidelines Synopsis by Eggener and colleagues summarizes prostate cancer screening guidelines from the US Preventive Services Task Force and the American Urological Association. The authors highlight commonalities and differences in the 2 guidelines; potential benefits and harms of prostate-specific antigen–based screening; and areas in need of future study or ongoing research.

Clinical Significance of a Positive Antinuclear Antibody Test

This JAMA Diagnostic Test Interpretation article by Fatemi and Kermani presents a 30-year-old woman with a 2-month history of fatigue and polyarthralgias—without joint swelling or morning stiffness. An antinuclear antibody test was positive. The patient denied photosensitivity, malar rash, oral ulcers, Raynaud phenomenon, or other symptoms suggestive of connective tissue disease. Test results obtained after a rheumatology consultation are summarized. How would you interpret these findings?