Medical News & Perspectives
Innovative animal studies are helping to show how stress and social factors cause changes in the brain that contribute to addiction.

SEE PAGE 2953

CLINICIAN’S CORNER
Evaluation of Competitive Athletes
Health Law and Ethics
Medical and legal issues in the participation evaluation of competitive athletes.

SEE PAGE 3011

Immunological Memory
The role of B-cell–related immunological memory in conferring long-term protection against invasive bacterial disease.

SEE PAGE 3019

Preserving Health
Health is subject to erosion from prenatal life onward, and early risk mediation is essential to preserve health.

SEE PAGE 3024

Author in the Room Teleconference
Join Sandra Dial, MD, on January 18, 2006, to discuss new research on the use of gastric acid–suppressive agents and risk of community-acquired Clostridium difficile.

SEE PAGE 2995

JAMA Patient Page
For your patients: Information about fitness.

SEE PAGE 3048

Genetic Testing for Long QT Syndrome
Among patients with long QT syndrome (LQTS), disease severity and response to therapy vary according to the genetic mutation involved. Napolitano and colleagues performed genetic screening in 430 patients with LQTS and 1115 family members and describe the types and prevalence of mutations found. In addition, the authors confirmed their findings by testing for the identified mutations in a separate cohort of patients. Based on their results, the authors propose a strategy for genetic screening for LQTS. In an editorial, Kaufman discusses the clinical importance of patient genotype in LQTS and the efficiency, affordability, accessibility, and accuracy of current genetic tests for LQTS.

SEE PAGE 2975 AND EDITORIAL ON PAGE 3027

Cardiovascular Disease and Cardiorespiratory Fitness
Low cardiorespiratory fitness associated with physical inactivity is a risk factor for cardiovascular disease (CVD). To describe the prevalence of low fitness in the US population aged 12 through 49 years and to relate low fitness to CVD risk factors, Carnethon and colleagues reviewed results of submaximal graded exercise testing and maximal oxygen consumption from a nationally representative survey. They found low fitness in 33.6% of adolescents and 13.9% of adults. Among their findings were that body mass index and waist circumference were inversely associated with fitness and that persons with low fitness had higher total cholesterol levels and systolic blood pressure and lower high-density lipoprotein cholesterol levels compared with persons with high fitness.

SEE PAGE 2981

Gastric Acid Suppressants and C difficile Disease
An increasing occurrence and severity of Clostridium difficile–associated disease (CDAD) has been reported. Dial and colleagues conducted 2 population-based case-control studies to assess whether the use of gastric acid–suppressive agents is associated with increased risk of CDAD in the community. They found that prescribed use of a gastric acid–suppressive agent was significantly associated with risk of community-acquired CDAD. Proton pump inhibitors were associated with a higher risk than H2-receptor antagonists.

SEE PAGE 2989

Erectile Dysfunction and Cardiovascular Disease
Erectile dysfunction and cardiovascular disease have similar risk factors, and it has been suggested that erectile dysfunction could be a marker for occult cardiovascular disease. To test this hypothesis, Thompson and colleagues examined the association of erectile dysfunction with subsequent cardiovascular disease in a prospective cohort study. The authors found that compared with men with no erectile dysfunction, men with erectile dysfunction had significantly increased risks of new cardiovascular events during the 7-year study.

SEE PAGE 2996

Air Pollution, Atherosclerosis, and Vessel Inflammation
Exposure to air pollution has been linked to an increased susceptibility to cardiovascular events, but the mechanism is not clear. In a mouse model, Sun and colleagues tested the hypothesis that long-term, low-level exposure to inhaled particulate matter has detrimental effects on the vasculature. Consistent with their hypothesis, they found that mice exposed to environmentally relevant concentrations of particulate matter had more atherosclerosis and vascular inflammation and a heightened vasoconstrictive response than mice exposed to filtered air. The effects were greater in mice fed a high-fat chow compared with mice fed normal chow.

SEE PAGE 3003