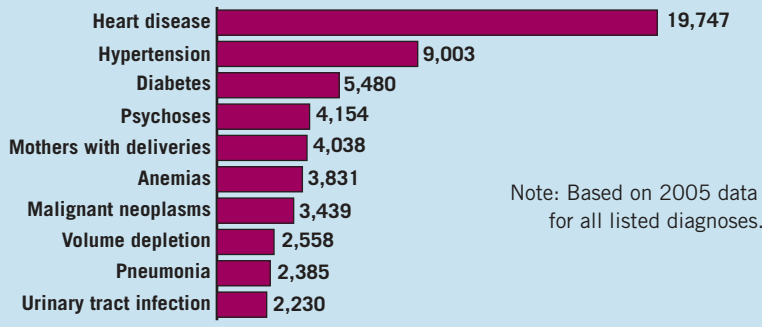
DATA WATCH

Top 10 Diagnoses for Discharges From Short-Stay Hospitals

(in thousands)



Note: Based on 2005 data for all listed diagnoses.

Source: Centers for Disease Control and Prevention

ELSEVIER GLOBAL MEDICAL NEWS

Caffeine Raises Ambulatory Glucose in Type 2 Diabetes

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Caffeine adversely affects glucose metabolism in diabetic patients by exaggerating postprandial glucose responses, which leads to higher daytime glucose concentrations, according to a report in Diabetes Care.

"The presence of hyperglycemic effects in these free-living individuals raises concerns about the potential hazards of caffeinated beverages for patients with type 2 diabetes," wrote James D. Lane, Ph.D., and colleagues from Duke University Medical Center in Durham, N.C. (Diabetes Care 2008;31:1-2).

In a double-blind crossover study, the researchers compared the effects of a moderate dose of caffeine (500 mg/day, roughly equivalent to four 8-ounce cups of brewed coffee) with placebo on glucose levels in 10 diabetic patients.

The patients (five men and five women, mean age, 63 years) were all habitual coffee drinkers with a mean self-reported daily intake of 520 mg/day, based on a conversion of beverage consumption using standard caffeine content measurements.

Analysis of the study data revealed that, compared with placebo, average daytime glucose levels increased in response to caffeine (8.0 vs. 7.4 mmol/L).

All had at least a 6-month history of type 2 diabetes managed by diet, exercise, and oral agents, but no exogenous insulin.

The subjects abstained from their daily coffee during the two 24-hour study days, and caffeine and placebo treatments were administered in identical gelatin capsules on different study days.

Ambulatory glucose concentration was assessed with continuous glucose monitoring over 72 hours, with planned analyses focusing on daytime glucose levels (when caffeine was at pharmacologically active concentrations) and postprandial responses, noted the authors.

Subjects consumed two capsules (total 250 mg) of either caffeine or placebo at breakfast and again at lunch. A standardized breakfast was consumed, whereas lunch and dinner were ingested "ad libitum."

Subjects recorded the times of each meal so that postprandial glucose response could be assessed.

The analysis revealed that, compared with placebo, average daytime glucose levels increased in response to caffeine (8.0 vs. 7.4 mmol/L). Average postprandial glucose responses were also found to be elevated after caffeine consumption (8.7 vs. 8.0 mmol/L after breakfast, 7.8 vs. 6.8 mmol/L after lunch, and 8.6 vs. 6.8 mmol/L after dinner).

"Caffeine exposure may have reduced overnight glucose compared to placebo (caffeine abstinence). This possibility will be the subject of future studies," wrote the authors."Repeated episodes of elevated glucose resulting from daily consumption of caffeinated beverages could impair clinical efforts aimed at glucose control and increase risk of diabetes complications."

The authors did not list any conflicts of interest related to the study. ■

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