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Coffee Intake and the Vasopressin System - a Combined Epidemiological and Experimental Study

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Statement of the Problem: Coffee is epidemiologically linked with both health benefits and risks. It is thought to be a diuretic but does also add to the daily fluid intake. The most important physiological regulator of body fluid balance and diuresis is vasopressin. The goal of this study was to map the effect of coffee intake on vasopressin concentration. Methodology & Theoretical Orientation: In the population-based cross-sectional Malmö Offspring Study (n=3270, age 18-75 years, 47% males) we investigated the association between coffee intake and plasma concentration of the vasopressin surrogate marker copeptin by linear regression analyses. Coffee intake was assessed by a 4-day food record.

Our findings suggest that copeptin concentration is lower among individuals with high coffee consumption and that copeptin concentration can be reduced acutely by coffee intake. The mechanisms behind the coffee-induced copeptin reduction may involve oral and gut reflexes, volume load and/or specific effects of coffee compounds.

Biography

Fredrika Schill is a PhD student at Lund University and specialist in cardiology at Skånes Universitetssjukvård in Malmö, Sweden. She has a special interest in cardiovascular diseases related to nutritional and hydrational status and to the vasopressin system. Her research is mainly epidemiological investigating effects of hydration level, coffee intake and concentration of the vasopressin marker copeptin and its association with cardiovascular disease. In this abstract, an experimental methods has also been used, investigated the effects of coffee intake on copeptin concentration.

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