

INFLUENCE OF "ENERGY DRINKS" ON THE BLOOD PRESSURE IN APPARENTLY HEALTHY YOUNG ADULTS

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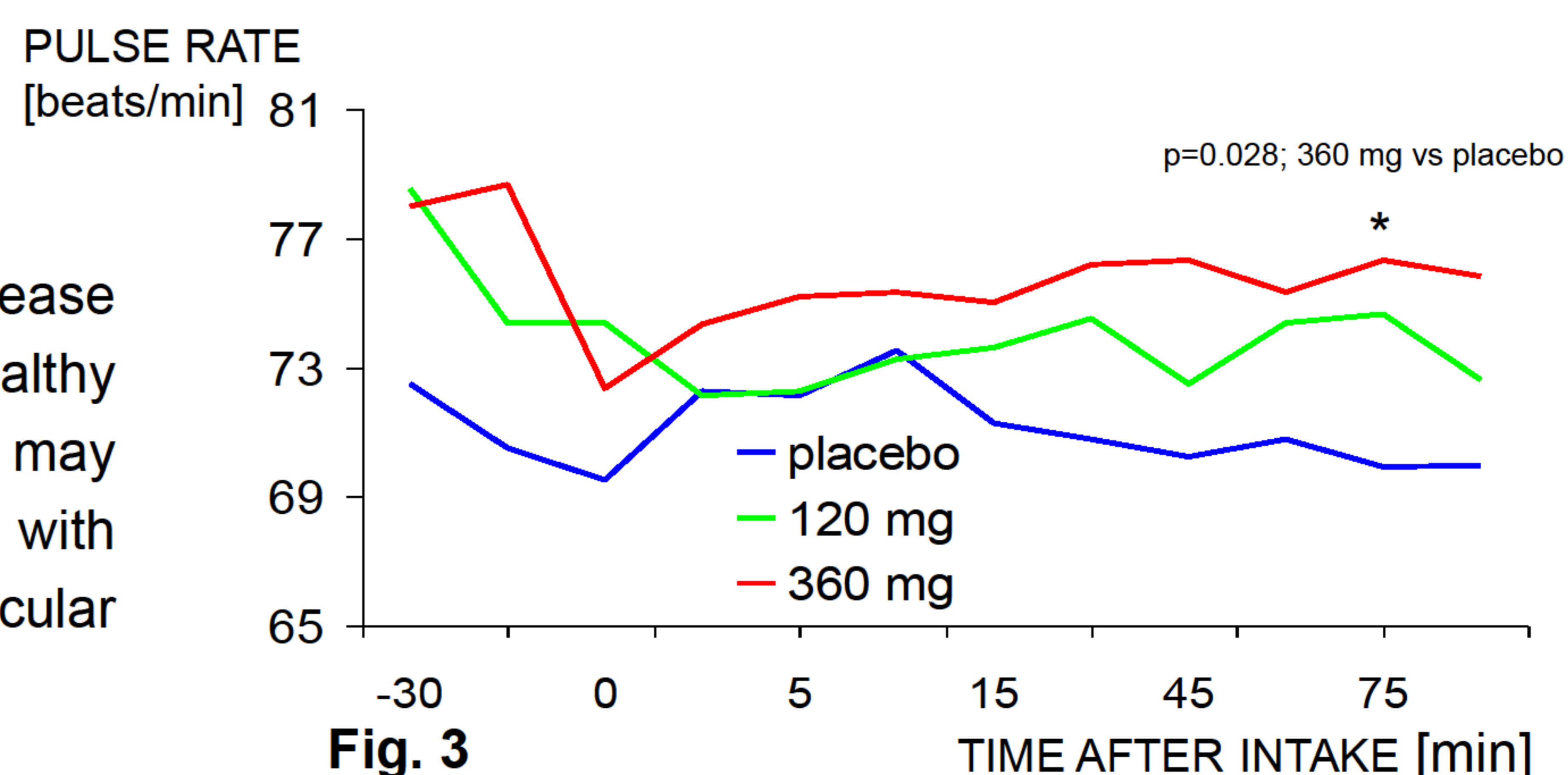
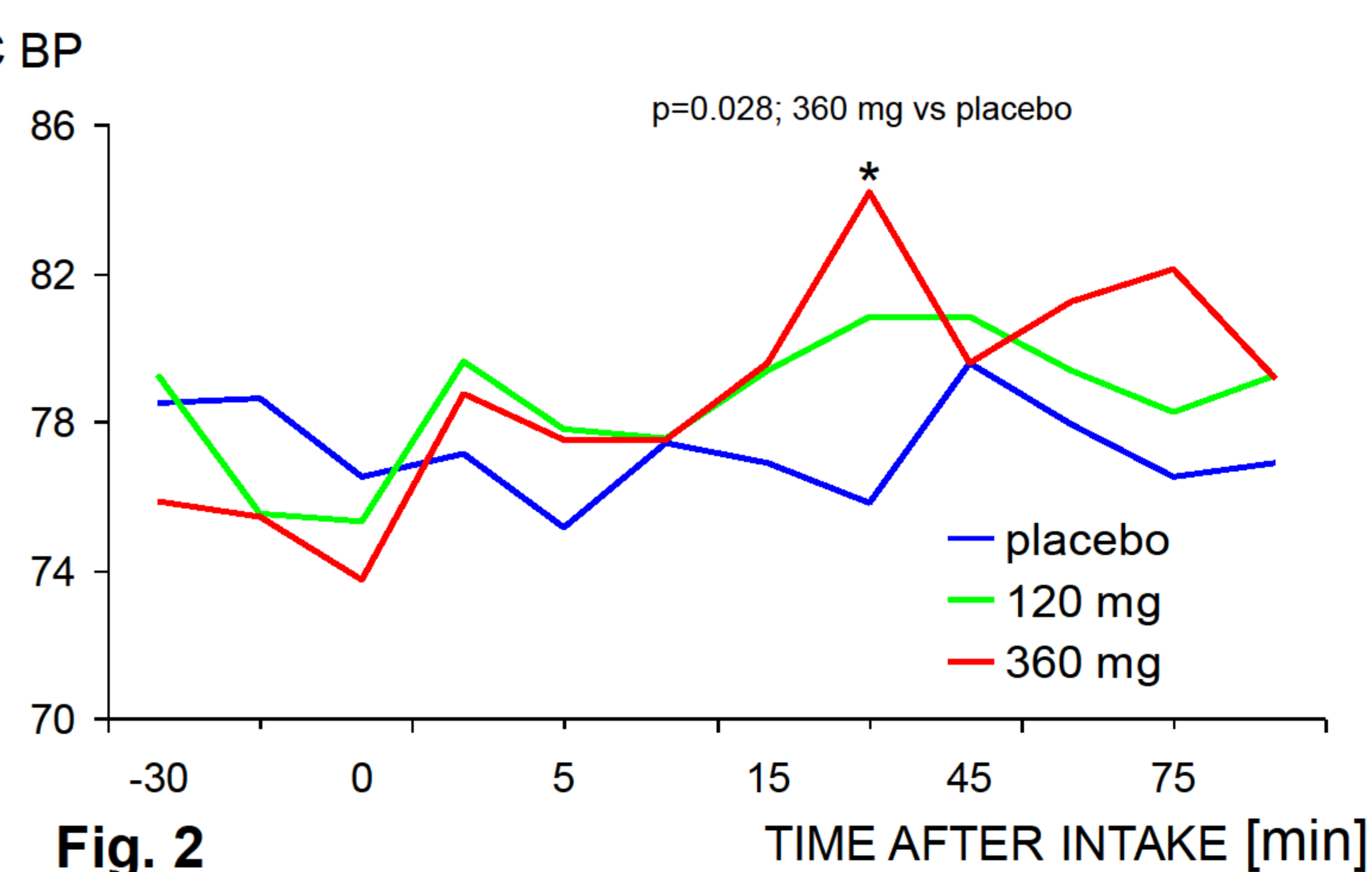
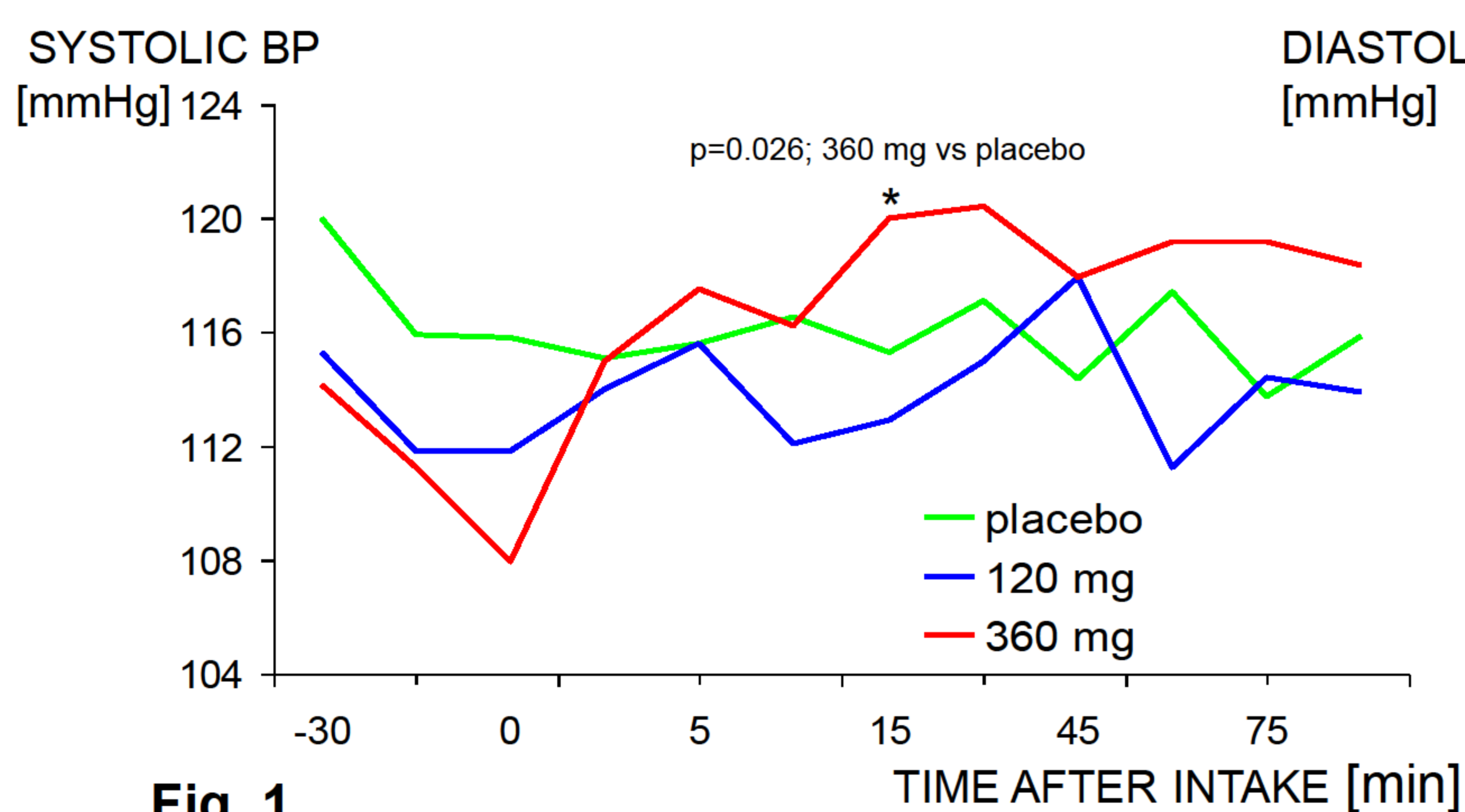
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Background: The growing interest in so called "energy drinks" (EDs) is observed among young adults. These drinks contain among others caffeine, taurine and inositol.

Aim: The aim of the study was to determine the influence of an EDs on the pulse rate and blood pressure (BP) in healthy young adults.

Methods: Study was performed using double blind method, with two concentrations of EDs and placebo. Eighteen healthy volunteers aged 20-35 years were enrolled into the study. During the visits three solutions were administered: placebo and EDs with 120 mg and 360 mg of caffeine. Measurements of BP and pulse rate were performed before (30, 15 and 1 minute) and after (2, 5, 10, 15, 30, 45, 60, 75, 90 minutes) ingestion of each of these solutions.

Results: Twelve volunteers completed entire study. The intake of an EDs containing 120 mg of caffeine didn't influence significantly blood pressure and pulse rate. However intake of energy drink containing 360 mg of caffeine leads to significant increase of BP (systolic BP increase 9.0 12.9 mmHg, $p=0.033$) (Fig. 1), (diastolic BP increase 9.4 5.1 mmHg, $p=0.028$) (Fig. 2) and a pulse rate (increase 5 2 beats/min, $p=0.042$) (Fig. 3). Three hours after ingestion of ED with 360 mg of caffeine all participants revealed cardiac arrhythmia with tachycardia, anxiety and insomnia.



Conclusions: 1. EDs in larger amounts increase blood pressure and pulse rate in young healthy adults. 2. Ingestion of large amount of EDs may create a health problems particularly in patients with arterial hypertension or other cardiovascular diseases.

