

The Effects of Dates (*Phoenix dactylifera L.*) and Fasting on the mRNA expression of Hepatic Drug Metabolizing Enzymes

By
Ruba Saeed Jaber Balasmeh

Supervisor
Dr. Yazun Jarrar

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Abstract

Introduction: Fasting and high consumption of *Phoenix dactylifera* are practiced during Ramadan month and might affect the drug response.

Aims: This study aimed to find out the effects of consuming *Phoenix dactylifera* and fasting on the mRNA expression of major hepatic drug-metabolizing enzymes in mice.

Methods: Forty-nine male Balb/c mice were treated by different doses of *Phoenix dactylifera* extract and fasted for several durations. Then, the expression of *cyp3a11*, *cyp2c29*, *cyp2d9*, and *ugt2b1* were analyzed using RT-PCR.

Result: It was found that fasting and consuming low dose of *Phoenix dactylifera* upregulated significantly the mRNA expression of drug-metabolizing enzymes.

Conclusion: Fasting and consuming *Phoenix dactylifera* upregulated the mRNA expression of drug-metabolizing enzymes in the mouse livers. These findings may explain, the variation in drug response during fasting of Ramadan month and further studies are required to confirm the findings of this study.

Keywords: Drug metabolizing enzymes, Fasting, mRNA expression, *Phoenix dactylifera*.