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## Effect of fresh pomegranate juice on the level of fasting serum glucose, insulin and melatonin in pre-diabetic individuals

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Various reports have linked pomegranate (*Punica granatum Linn*) with diabetes prevention and treatment. However, before pomegranate or any of its fractions can be medically recommended for the management of diabetes, extensive clinical studies are still desired. This study measured the direct effect of fresh pomegranate juice on the level of fasting serum glucose, insulin, and melatonin in subjects with impaired fasting glucose (IFG). Blood samples from 28 participants with impaired fasting glucose were collected after at least 10 hrs fasting, then after 1 and 3 hours from the pomegranate juice administration at 1.5 mL per kg of the body weight. Serum glucose was measured by standard methods using the BS-200 Chemistry Analyzer, while a commercially available immunoassay kits were used to measure human insulin and melatonin. The results from this study observed lower fasting serum glucose levels as well as lower insulin resistance ( $P < 0.05$ ) among the IFG participants after 3 hours of pomegranate juice administration. This hypoglycemic response to pomegranate juice was not affected by the patient's gender and was found to decrease with age. On the other hand, pomegranate juice, after 1 hour of its consumption, was found to decrease the level of serum melatonin, while it increased the level of serum insulin among the tested population. These results offer some encouragement regarding the consumption of pomegranate juice by subjects with IFG.

### Biography

Saleem Ali Banihani has completed his PhD in Clinical Bioanalytical Chemistry from Cleveland Clinic-Cleveland State University joint program. He is currently the Vice Dean of the Faculty of Applied Medical Sciences at Jordan University of Science and Technology, one of the top Universities in the middle east. He has published more than 17 articles in reputed journals in the fields of clinical nutrition and andrology.

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