

## Selecting Intermittent Fasting Type to Improve Health in Type 2 Diabetes: A Machine Learning Approach

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### Abstract:

Intermittent fasting (IF) is the cycling between periods of eating and fasting. The main types of IF are complete alternate-day fasting; time-restricted feeding (eating within specific time frames such as the most prevalent 16:8 fast, with 16 hours of fasting and 8 hours for eating); religious fasting such as the Ramadan (occurs one month per year, with eating taking place only after nightfall). IF can be effective in reducing metabolic disorders and age-related diseases by bringing about changes in metabolic parameters associated with type 2 diabetes. Questions do remain, however, about the effects of the different types of IF as a function of the age at which fasting begins, gender and severity of type 2 diabetes. In this paper we describe a machine learning approach to selecting the best type of IF to improve health in type 2 diabetes. For the purposes of this research, the health outcomes of interest are changes in fasting glucose and insulin. The different types of intermittent fast offer promising non-pharmacological approaches to improving health at the population level, with multiple public health benefits.

### Biography

Shula Shazman received her B.Sc. in Computer Sciences from the Technion, Israel in 1993.

In 2011 she has finished her M.Sc. + Ph.D. in Biological Sciences, In the faculty of biology, at the Technion, Israel. The title of thesis is 'Computational approaches for characterizing Protein-Nucleic-Acid Binding'.

During 2011–2015 she has been a postdoctoral fellow in the Department of Biochemistry & Molecular Biophysics, Columbia University, New-York, USA.

Currently Shula works at the Department of Mathematics and Computer Science, The Open University of Israel. Their current projects are 'Disordered proteins' and 'Intermittent Fasting as a tool to treat Type 2 Diabetes'.