# Poor Breakfast Habits in Adolescence Predict Metabolic Syndrome in Adulthood

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#### Purpose:

To analyze if poor breakfast habits in adolescence predict metabolic syndrome and its components in adulthood.

### Background:

Regular breakfast consumption has many benefits for adolescence. It provides energy and nutrients that lead to an increased concentration in the classroom, helps to maintain a healthy body weight, and satisfies hunger until lunch time. Regardless of these benefits many students are still skipping breakfast, which may cause them to snack on foods high in fat and sugar. Studies are starting to show that there may be a link between skipping breakfast as an adolescent, developing metabolic syndrome later in life. Metabolic syndrome is a cluster of risk factors which include: obesity, high cholesterol, high blood pressure, and impaired glucose regulation and is associated with cardiovascular disease, diabetes, and early death.

### Study Design:

Over 1000 participants were followed over a 30 year period. Participants filled out a survey at the age of 16, which discussed lifestyle factors, health and socio-economic conditions. Questions on survey regarding breakfast were broken down into food groups, which included normal food groups eaten at breakfast (milk products, eggs, fruit, bread, etc.), 'something else', 'nothing', or 'drink only'. From these categories, the participant needed to underline which items they normally eat for breakfast. Follow up data collections were taken at 2, 5, 14, and 25 years, as well as, health examinations, in order to classify prevalence of metabolic syndrome.

### **Results:**

Results showed that 27% of the participants had developed metabolic syndrome at the age of 43. Of the 27%, 9% were classified as having poor breakfast habits at the age of 16. Participants that had poor breakfast habits were also associated with an increase in central obesity (linked to development of chronic diseases), and a high fasting blood glucose.

## Conclusion:

Poor breakfast habits in adolescence predicted the metabolic syndrome in adulthood. Poor breakfast habits included skipping breakfast, only having a beverage, or a sweet item. Further research is needed to be done to fully understand the link between poor breakfast habits and metabolic syndrome later in adulthood. Having a well-balanced meal in the morning is important for focusing in school but for also health status later in life.