

# Fertility problems? Joining the 'breakfast club' can help

October 1 2013

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This is an image of Professor Oren Froy in his laboratory at the Hebrew University of Jerusalem. Credit: Hebrew University photo by Sasson Tiram

A new study by researchers at the Hebrew University of Jerusalem and Tel Aviv University reveals that eating a good breakfast can have a positive impact on women with problems of infertility.

In recent years, nutritional research has found that our weight is affected

not only by the level of calorie intake, but also by the question of when to consume large amounts of calories.

Now, research, conducted by Prof. Oren Froy, director of the Nutrigenomics and Functional Foods Research Center at the Robert H. Smith Faculty of Agriculture, Food and Environment of the Hebrew University, and Ma'ayan Barnea, plus Prof. Daniela Jocabovitz and Dr. Julio Weinstein from Tel Aviv University and Wolfson Medical Center, shows that a big breakfast increases fertility among woman who suffer from menstrual irregularities.

The study examined whether meal times have an impact on the health of woman with menstrual irregularities due to Polycystic Ovary Syndrome (PCOS). PCOS affects approximately 6-10% of woman of reproductive age, disrupting their reproductive abilities. This syndrome creates a resistance to insulin, leading to an increase in male sex hormones (androgens), and can also cause menstrual irregularities, hair loss on the scalp though increase in body hair, acne, fertility problems and future diabetes.

The experiment was carried out at Wolfson Medical Center on 60 women over a 12-week period. The women, from the ages of 25 to 39, were thin with a BMI (body mass index) of less than 23 and suffered from PCOS.

The women were divided into two groups and were allowed to consume about 1,800 calories a day. The difference between the groups was the timing of their largest meal. One group consumed their largest meal, approximately 980 calories, at breakfast, while the other at dinner. Researchers wanted to examine whether the schedule of calorie intake affects insulin resistance and the increase in androgens among woman suffering from PCOS. The women kept records of exactly what they ate.

The findings, recently published in the journal, "*Clinical Science*," showed improved results for the group that consumed a big breakfast. Glucose levels and insulin resistance decreased by 8%, while the second group ("dinner") showed no changes. Another finding showed that among the "breakfast" group, testosterone (one of the androgens) levels decreased by nearly 50%, while the "dinner" group level stayed neutral. In addition, there was a much higher rate of ovulating woman within the "breakfast group" compared to the "dinner" group, showing that eating a hearty [breakfast](#) leads to an increase in the level of fertility among [woman](#) with Polycystic Ovary Syndrome.

According to Prof. Froy, "The research clearly demonstrates that indeed the amount of calories we consume daily is very important, but the timing as to when we consume them is even more important."

Provided by Hebrew University of Jerusalem

Citation: Fertility problems? Joining the 'breakfast club' can help (2013, October 1) retrieved 5 May 2024 from <https://medicalxpress.com/news/2013-10-fertility-problems-breakfast-club.html>

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