PRESS RELEASE

**Eating Breakfast Regularly Mitigates the Risk of Type 2 Diabetes**

**Eat or skip breakfast? Does eating breakfast regularly mitigate the risk of diabetes? - These questions have not yet been answered conclusively by research. Around 20% of the German population skips breakfast in the morning. In the 18-29 age group, the rate is even higher – about 50%. A meta-analysis carried out at the German Diabetes Center (DDZ) now shows that adult men and women who skip breakfast have a 33% higher risk of developing type 2 diabetes. The findings are published in the current issue of the *Journal of Nutrition*.**

**Düsseldorf (DDZ)** – Epidemiological studies have shown that skipping breakfast is associated with a risk of type 2 diabetes. However, it has never been demonstrated how this is related to obesity. Obesity is a major risk factor for the occurrence of type 2 diabetes. It has been shown that obese people are more likely than people of normal weight not to have breakfast. In addition, skipping breakfast seems to be associated with an increase in weight.

The research team led by Dr. Sabrina Schlesinger, head of the junior research group Systematic Reviews at the DDZ, compared men and women in six long-term studies taking into account the body mass index (BMI). The results of the study show a dose-response relationship, i.e. the risk of diabetes increased with increasing number of days on which breakfast was skipped. The highest risk was observed for skipping breakfast 4-5 days per week. From the 5th day on, no further increase in risk was observed as a result of not having breakfast. "This correlation is partly due to the influence of obesity. Even after the BMI had been taken into account, skipping breakfast was associated with an increased risk of diabetes," said Dr. Sabrina Schlesinger.

**Meta-analysis**

In their meta-analysis, the research team summarized data from six different international observational studies. Overall, data from 96,175 participants, of whom 4,935 developed type 2 diabetes during the course of the study, were evaluated. An explanation for the relationship between skipping breakfast and the risk of type 2 diabetes could be whether the lifestyle in general is healthy or not. Participants who skip breakfast may generally have a less favorable lifestyle. For example, they may consume high-calorie snacks and drinks, be less physically active, or smoke more. However, these factors were included in the evaluation so that the observed relationship could be explained by other factors. "Further studies are needed, which in addition to the elucidation of the mechanisms, also explore the influence of the composition of the breakfast on the risk of diabetes," said Dr. Sabrina Schlesinger. "Basically, a regular and balanced breakfast is recommended for all people – with and without diabetes," said the epidemiologist and nutritionist.

**Original Publication:**Ballon A, Neuenschwander M, Schlesinger S. Breakfast skipping is associated with increased risk of type 2 diabetes among adults: a systematic review and meta-analysis of prospective cohort studies. J Nutr 2018, https://doi.org/10.1093/jn/nxy194

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Diabetes, diabetes risk, type 2 diabetes, breakfast, diet

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The German Diabetes Center (DDZ) serves as the German reference center for diabetes. Its objective is to contribute to the improvement of prevention, early detection, diagnosis and treatment of diabetes mellitus. At the same time, the research center aims at improving the epidemiological data situation in Germany. The DDZ coordinates the multicenter German Diabetes Study and is a point of contact for all players in the health sector. In addition, it prepares scientific information on diabetes mellitus and makes it available to the public. The DDZ is part of the Leibniz Association (Wissenschaftsgemeinschaft Gottfried Wilhelm Leibniz, WGL) and is a partner of the German Center for Diabetes Research (DZD e.V.).

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**For more information, please contact:**

Christina A. Becker

Head, Press and Public Relations

German Diabetes Center(DDZ)

Leibniz Center for Diabetes Research

at the Heinrich Heine University of Düsseldorf

Phone: 0211-3382-450

email: Christina.Becker@ddz.uni-duesseldorf.de