PRESS RELEASE

**Women with Diabetes: 50 Percent Increased Risk of Stroke**

**Women with diabetes have an increased risk of developing cardiovascular disease. Studies from the German Diabetes Center show that the risk of stroke is 50 percent higher in women with diabetes than in women without diabetes. In the long term, diabetes can damage many organs, especially if the metabolism is not properly regulated. Heart attack, stroke, kidney failure, nerve damage and also fatty liver disease, depression and even dementia can be the consequences. Initial results of the German Diabetes Study indicate that there also appear to be gender-specific differences in the development of insulin resistance and nerve damage in the early course of diabetes.**

**Düsseldorf (DDZ)** – In Germany, almost 7 million people have diabetes, half of whom are women. The diagnosis is often unclear at disease onset because it is difficult to distinguish between the diabetes types in the individual case. Up to 95 percent of those affected have type 2 diabetes. A study published in the German Medical Journal (Deutsches Ärzteblatt) by the German Diabetes Center (Deutsches Diabetes-Zentrum, DDZ) shows that in women between the ages of 40 and 80, there is a significantly lower increase in the prevalence of type 2 diabetes than in men. After the age of 80, however, the prevalence levels are again comparable for women and men.

In cooperation with partners of the University of Erlangen-Nuremberg, the German Diabetes Center has investigated the risk of stroke in women with diabetes, using the population-based registry of the University of Erlangen-Nuremberg for this purpose. Out of 100,000 women with diabetes, about 300 suffer a stroke compared to around 200 women out of 100,000 women without diabetes. This means that women with diabetes have a 50% higher risk of stroke than women without diabetes. “A stroke is a major risk for chronic impairment of patients' quality of life and results in high costs for the health care system," said Professor Michael Roden, board member of the German Diabetes Center, on the occasion of World Diabetes Day on November 14, 2017. He went on to say that further efforts must be made to diagnose diabetes at an early stage in order to prevent secondary illnesses such as stroke.

The Institute for Health Services Research and Health Economics at the German Diabetes Center investigates the estimation of risks of relevant health care outcomes, especially diabetic concomitant and secondary diseases (St. Vincent targets) and depression as mental co-morbidity. In the area of health economics, the focus is on the health economic evaluation of cost and cost-effectiveness analyses in the area of diabetes prevention and treatment to reduce diabetic co-morbidity.

In the German Diabetes Study, which is conducted at eight locations throughout Germany by the German Center for Diabetes Research (DZD), it was shown that seven per cent of those affected with newly diagnosed diabetes already have initial symptoms of nerve damage. In the case of women, the scientists have shown that a decrease in nerve conduction velocity is caused by other factors than in men. These are to be further investigated in the course of the study, and new therapy concepts are to be developed as a result.

**World Diabetes Day (November 14th):**

World Diabetes Day, sponsored by the International Diabetes Federation (IDF) and the World Health Organization (WHO), has taken place since 1991. The 14th of November was chosen because Frederick G. Banting was born on this day; he discovered insulin together with Charles Herbert Best in 1921. Since 2007, World Diabetes Day has been an official United Nations (UN) day. The theme of World Diabetes Day 2017 is "Women and Diabetes – Our Right to a Healthy Future". The campaign emphasizes the importance of affordable and equal access for all women who have diabetes or who are at risk of developing the disease.

**Original Publications:**

1.Tamayo, T., Brinks, R. et al. The Prevalence and Incidence of Diabetes in Germany: An Analysis of Statutory Health Insurance Data on 65 Million Individuals From the Years 2009 and 2010. Dtsch Arztebl International 113, 177–82 (2016).

2.Icks, A., Claessen H. et al. Incidence and relative risk of stroke in the diabetic and the non-diabetic population between 1998 and 2014: A community-based stroke register. PLOS ONE accepted, (2017).

3.Strom, A., Brüggemann, J. et al. Pronounced reduction of cutaneous Langerhans cell density in recently diagnosed type 2 diabetes. Diabetes 63, 1148–1153 (2014).

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The German Diabetes Center (DDZ)  is a 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.).

**Recent press releases of the DDZ are available at** [**www.ddz.uni-duesseldorf.de**](http://www.ddz.uni-duesseldorf.de)

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