

## Press Release

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### **New research shows unemployment is related to type 2 diabetes in middle-aged men.**

A new study from EU-funded H2020 project DynaHEALTH explores the relationship between varying lengths of unemployment with the risk of type 2 diabetes in the general population. The results show that men with high exposure to unemployment (over a year during the 3-year follow-up) had a higher risk for pre-diabetes and screen-detected type 2 diabetes than employed men, after adjustment for education, smoking, alcohol intake, physical activity and body mass index.

The study published in *Primary Care Diabetes*, could help clinicians recognise unemployment as a risk factor for prediabetes and type 2 diabetes, and consider screening for diabetes in middle-aged individuals. Knowledge of the risks could also help the unemployed individuals themselves.

Dr Nina Rautio, lead author, said "Our study adds to existing evidence that unemployment is related to poor health with the outcome of type 2 diabetes, one of the largest global health emergencies of the 21<sup>st</sup> century, which can be prevented or delayed by lifestyle modifications".

Among the middle-aged people studied, a fifth of men and a tenth of women were found to have previously undiagnosed pre-diabetes or type 2 diabetes. Among the individuals with high exposure to unemployment (over a year), 13.1% of the diabetes risk was attributable to unemployment in men and 10.3% in women. Compared to those employed, men unemployed for more than a year were 1.6 times more likely to have prediabetes and 2.6 times more likely to develop type 2 diabetes, even after adjustment for education, lifestyle factors and BMI. In women, the risks reduced after adjustments for lifestyle factors and BMI.

The research concluded that unemployment history could be an important screening factor to detect undiagnosed impaired glucose metabolism by healthcare professionals. Since the progression towards type 2 diabetes can be prevented or delayed with lifestyle modifications, it is crucial to target screening and preventive actions to the individuals at highest risk for type 2 diabetes at the earliest possible time point.

This study is part of the Northern Finland Birth Cohort (NFBC) 1966 study, based on 12,058 live-born children, whose expected dates of birth were in 1966. The current research used follow-up data taken at 46 years of age where 6,746 people completed the questionnaire concerning education and lifestyle factors. In the clinical examination, 4925 individuals without



previously diagnosed diabetes participated in oral glucose tolerance tests. The final sample, after various exclusions, was 1970 men and 2544 women.

The research was led by DynaHEALTH project coordinator, The University of Oulu in Finland and was supported by funding from the European Commission Horizon 2020 programme, the Academy of Finland and the European Regional Development Fund.

DynaHEALTH is a multi-disciplinary four-year research project, involving 14 partners from six European countries. The project uses a unique approach by capitalising on a number of existing studies involving 1.5 million Europeans. The project is focused on the challenge of healthy and active ageing through reducing the risks of obesity and type 2 diabetes. DynaHEALTH is addressing the specific need for personalised healthcare based on a biopsychosocial model. DynaHEALTH is developing a dynamic life course model to better understand and characterise the combined effects of glucose metabolism and psychosocial stress, which have an impact on individuals as they age (health and workability). Outcomes will include the development of new technologies and clinical interventions for targeted disease prevention.

The article is "Accumulated exposure to unemployment is related to impaired glucose metabolism in middle-aged men: A follow-up of the Northern Finland Birth Cohort 1966," by Nina Rautio et al. (doi: 10.1016/j.pcs.2017.03.010). It appears online in *Primary Diabetes Care*, (2017), published by Elsevier.

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**Notes to editors:**

See more at: [www.dynahealth.eu](http://www.dynahealth.eu)

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Copies of the paper are available to credentialed journalists upon request; please contact Elsevier's Newsroom at [newsroom@elsevier.com](mailto:newsroom@elsevier.com) or +31 20 485 2492.

**About DynaHEALTH**

Partners:

- University of Oulu, Centre for Life Course Health Research and the Northern Finland Cohort Centre, Finland (Coordinator);

- Abbott, Spain;
- Academic Medical Centre, Amsterdam, the Netherlands;
- Beta Technology Ltd, UK;
- Brunel University London, UK;
- Erasmus University Medical Centre Rotterdam, the Netherlands;
- Imperial College London, UK;
- Institute of Diabetes Research, Helmholtz Zentrum München, Germany;
- Department of Clinical Epidemiology (formerly Institute of Preventive Medicine), Bispebjerg and Frederiksberg Hospitals, The Capital Region, Copenhagen, Denmark;
- Laboratorios Ordesa, Spain;
- Ludwig-Maximilians-University of Munich, Germany;
- The Folkhälsan Research Centre, Finland;
- University College London, UK;
- University of Granada, Spain.



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### About Horizon 2020

Europe has a 10 year growth and jobs strategy called **Europe 2020**. It was launched in 2010 to create the conditions for smart, sustainable and inclusive growth. Five headline targets have been agreed for the European Union to achieve by the end of 2020, covering employment, research and development, climate/energy, education, and social inclusion and poverty reduction.

Europe has identified new engines to boost growth and jobs; these are addressed by seven '**flagship initiatives**'. Within each initiative both the European Union and national authorities have to coordinate their efforts so they are mutually reinforcing. '**Innovation Union**' is one such flagship initiative. '**Innovation Union**' is the European Union strategy to create an innovation-friendly environment that makes it easier for great ideas to be turned into products and services that will bring our economy growth and jobs.

**Horizon 2020** is the financial instrument implementing the Innovation Union and:

- Has a budget of nearly €80 billion for the period 2014-2020 which makes it the biggest European Union Research and Development programme ever.
- Is open to everyone.
- Has three priorities (Industrial Leadership, Excellent Science and Societal Change); each of which has a number of sections with a different focus and each section has a detailed work programme.

<http://ec.europa.eu/programmes/horizon2020/en/what-horizon-2020>

### About Primary Care Diabetes



Primary Care Diabetes publishes original research articles and high quality reviews in the fields of clinical care, diabetes education, nutrition, health services, psychosocial research and epidemiology and other areas as far as is relevant for diabetology in a primary-care setting. The journal also publishes news and articles concerning the policies and activities of Primary Care Diabetes Europe and reflects the society's aim of improving the care for people with diabetes mellitus within the primary-care setting.

[www.primary-care-diabetes.com](http://www.primary-care-diabetes.com)