# Diabetes in Europe - Prevention using Lifestyle, physical Activity and Nutritional intervention (DE-PLAN) project

Submission date	<b>Recruitment status</b> No longer recruiting	<ul><li>Prospectively registered</li></ul>		
29/07/2016		☐ Protocol		
Registration date	Overall study status	Statistical analysis plan		
03/08/2016	Completed	[X] Results		
Last Edited	Condition category	[X] Individual participant data		
12/09/2023	Nutritional. Metabolic. Endocrine			

#### Plain English summary of protocol

Background and study aims

Type 2 diabetes mellitus (T2DM) is a growing problem worldwide. People with T2DM have difficulty controlling their blood sugar (glucose) as they do not produce enough insulin to function properly (insulin deficiency), or that the body's cells don't react to insulin as they should do (insulin resistance). T2DM is linked to a number of severe complications, as well as increasing the risk of heart disease (cardiovascular disease) and cancer. In recent years, greater stress is being put on diabetes prevention, by encouraging people to change their lifestyles to reduce their risk of developing the disease. A number of studies have looked at the benefits of individual counseling, however this can be expensive and isn't always relevant to 'real life'. This study will look at a diabetes prevention program which combines group activities and motivational follow up to encourage healthier lifestyle choices. The aim of this study is to find out if this diabetes prevention program is an effective way of reducing diabetes risk.

#### Who can participate?

Adults aged 25 years or over who live in Kraków and have a high risk of developing diabetes.

#### What does the study involve?

Participants are invited to take part in a ten month diabetes prevention course run by a trained nurse. The course involves a combination of group sessions, focusing on changing diet and exercise habits, six motivational telephone sessions, two motivational letters and the opportunity to take part in exercise sessions twice a week. The course stresses the importance of social support and family members or spouses are also able to take part in the sessions. At the start of the study and then after 12 and 36 months, participants have their diabetes risk assessed by having their blood sugar control tested through a series of blood tests, having weight and blood pressure measurements taken, and completing a range of questionnaires. The cost effectiveness of the course is assessed at the end of the study by recording the costs of all activities involved.

What are the possible benefits and risks of participating?
There are no direct benefits or risks involved for participants taking part in this study.

Where is the study run from?

The study is coordinated by Jagiellonian University and takes place in nine Primary Health Care Centers in Kraków (Poland)

When is the study starting and how long is it expected to run for? January 2006 to January 2014

Who is funding the study?

The Commission of the European Communities, Directorate C - Public Health (Belgium)

Who is the main contact? Dr Aleksandra Gilis-Januszewska myjanusz@cyfronet.pl

# **Contact information**

#### Type(s)

Scientific

#### Contact name

Dr Aleksandra Gilis-Januszewska

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## Additional identifiers

#### Protocol serial number

DEPLAN/PR1.02/2007

# Study information

#### Scientific Title

The feasibility and cost effectiveness of screening and prevention of type 2 diabetes by lifestyle intervention in real life community setting within existing health care systems in Europe: Diabetes in Europe Prevention using Lifestyle, physical Activity and Nutritional intervention (DE-PLAN) project

#### Acronym

#### **DE-PLAN**

#### **Study objectives**

#### Hypothesis:

The translation of the current research evidence about diabetes preventive intervention programmes into clinical settings within existing health care systems in Europe is feasibile and cost-effective.

#### Study aim:

The aim of this study is to develop and test models of efficient identification and site specific intervention of individuals at high risk of type 2 diabetes in the community.

### Ethics approval required

Old ethics approval format

#### Ethics approval(s)

Ethical Commitee of Jagiellonian University, 23/03/2006, ref: KBET/43/L/2006

#### Study design

Non-randomised interventional study

#### Primary study design

Interventional

#### Study type(s)

Prevention

#### Health condition(s) or problem(s) studied

Prediabetes, high diabetes risk

#### **Interventions**

Patients fulfilling the inclusion criteria are invited to participate in the lifestyle intervention consisting of two parts: an intensive initial phase followed by an ongoing maintenance phase, based on reinforced behaviour modification focusing on five lifestyle goals: weight loss, reduced intake of total and saturated fats, increased consumption of fruits, vegetables and fibre and increased physical activity.

A trained nurse certified in diabetes prevention delivers the intervention over a period of 10 months. This involves 10 group sessions focusing on diet and physical activity changes, six motivational telephone sessions, two motivational letters and the opportunity to participate twice weekly in physical activity sessions, over a period of 10 months. During each session, printed educational materials related to the topic of the session are distributed. Social support is emphasised in the group setting and participants are also encouraged to involve their own social circle in the lifestyle changes. A spouse or other family member can also participate in the sessions.

Patients are examined at baseline, after 12 and 36 months of initiation of the study. Questionnaires (FINDRISC, clinical and lifestyle and Quality of life) and biochemical tests including fasting and 120'OGTT glucose, serum triglycerides, HDL and total cholesterol, as well as body mass index (BMI), waist circumference, diastolic and systolic blood pressure are measured. Lifestyle changes are explored with the use of self reported questionnaire

(consumption of vegetables and fruits, fat and saturated fat, alcohol and physical activity during the past year).

#### Intervention Type

Behavioural

#### Primary outcome(s)

Type 2 diabetes mellitus risk is measured at baseline, 12 and 36 months using metabolic and anthropometric indices and questionnaires:

#### Biochemical tests:

- 1. Fasting glucose mmol/l
- 2. 120'OGTT glucose mmol/l
- 3. Serum triglycerides mmol/l
- 4. HDL cholesterol mmol/l
- 5. Total cholesterol mmol/l

#### Anthropometric measurements:

- 1. Body mass index (BMI), calculated as weight divided by height squared
- 2. Waist circumference (cm), measured midway between the lowest rib and iliac crest
- 3. Blood pressure (mmHg), measured while sitting after 10 minutes rest

#### Questionnaires:

- 1. Finnish Diabetes Risk Score (FINDRISC) questionnaire
- 2. Questionnaire measuring lifestyle (specially designed for the purpose of this study)
- 3. Questionnaire measuring sociodemographic data regarding, education, marital status, working status, smoking (specially designed for the purpose of this study)
- 4. Questionnaire measuring current health status, history of elevated glucose level, cardiovascular disease, hypertension, hyperlipidemia, depression, other chronic conditions, currently taken medication. family history of diabetes (specially designed for the purpose of this study)

## Key secondary outcome(s))

- 1. Quality of life is measured using the 15D HRQoL questionnaire at baseline, 12 and 36 months
- 2. Cost effectiveness is assessed by collecting the costs of screening and intervention activities (i.
- e. related personnel use, services provided, consumables, media costs, etc.) at 36 months

## Completion date

01/01/2014

# **Eligibility**

#### Key inclusion criteria

- 1. Aged 25 years and over
- 2. Krakow city inhabitants
- 3. High diabetes risk (Finnish Diabetes Risk Score (FINDRISC) >14)

## Participant type(s)

Patient

## Healthy volunteers allowed

No

## Age group

Adult

#### Sex

All

#### Key exclusion criteria

- 1. Known or oral glucose tolerance test (OGTT) screened diabetes
- 2. Known chronic disease

#### Date of first enrolment

01/01/2006

#### Date of final enrolment

01/01/2009

## **Locations**

#### Countries of recruitment

Poland

## Study participating centre Jagiellonian University

Department of Endocrinology Medical College Kopernika 17 Krakow Poland 31-501

## Study participating centre Niepubliczny Zakład Opieki Medicina

Rogozińskiego 12 Kraków Poland 31-559

## Study participating centre

Niepubliczny Zakład Opieki Zdrowotnej Praktyka Lekarza Rodzinnego

Inicjatywy lokalnej 5

Kraków

**Poland** 

30-499

## Study participating centre Niepubliczny Zakład Opieki Centrum Medyczne Prokocim Nowy

Teligi 8 Kraków Poland 30-835

## Study participating centre Niepubliczny Zakład Opieki Centrum Medyczne Nowa-Huta

Ujastek 3 Kraków Poland 30-969

## Study participating centre Niepubliczny Zakład Opieki Przychodnia Na Wzgórzach

Na Wzgórzach 1 Kraków Poland 31-721

## Study participating centre Niepubliczny Zakład Opieki Praktyka Grupowa Lekarzy Rodzinnych

Bocheńska 4 Kraków Poland 30-500

## Study participating centre

Firma Marketingowo - Medyczna, Niepubliczny Zakład Opieki Mark- Med

Na Skarpie 27/211 a Kraków Poland 31-911

## Study participating centre Praktyka Grupowa Lekarzy Rodzinnych

2 Pułku Lotniczego 22

Kraków Poland 31-869

Study participating centre
Niepubliczny Zakład Opieki "Przychodnia Salwatorska"
Komorowskiego 12
Kraków
Poland
30-106

# Sponsor information

#### Organisation

The Commission of the European Communities, Directorate C - Public Health

#### **ROR**

https://ror.org/00k4n6c32

# Funder(s)

## Funder type

Government

#### **Funder Name**

The Commission of the European Communities, Directorate C - Public Health

## **Results and Publications**

Individual participant data (IPD) sharing plan

## IPD sharing plan summary

Available on request

## **Study outputs**

Output type	Details	Date created Date added	Peer reviewed?	Patient-facing?
Results article	results	15/02/2017	Yes	No
Results article	results	02/01/2018	Yes	No

Results article		23/03/2018	12/09/2023 Y	es	No
<u>Dataset</u>	Participant information sheet		12/09/2023 N		No
Participant information sheet		11/11/2025	11/11/2025 N	lo	Yes