The DE-PLAN study "Diabetes in Europe – Prevention using Lifestyle, Physical Activity and Nutritional Intervention" in Greece – GREECE

Short description of the intervention:

The DE-PLAN study ("Diabetes in Europe – Prevention using Lifestyle, Physical Activity and Nutritional Intervention") is a large-scale diabetes prevention initiative, which aims to develop community-based type 2 diabetes prevention programmes for individuals at high risk across Europe. Led by the University of Helsinki, the project, realised in 17 countries, aimed at developing and testing models of efficient identification and site specific intervention of individuals at high risk of type 2 diabetes in the community. The whole European DE-PLAN study (whose Greek dietary part is reported here) aimed at implementing a lifestyle intervention programme to prevent T2DM within the national healthcare system of each participating country and by tailoring activities to the specific ''real-life'' local setting.

According to the general DE-PLAN protocol, each centre of the participating countries was allowed to follow any intervention strategy— group-based or individual-based consultation—with the objective of achieving better understanding of the disease risk from the participants and of building up motivation for an intention to change lifestyle. In the Greek site, group-based consultation interventions were chosen, as they were deemed to be more conveniently implemented, more cost-effective and efficacious from the participants' standpoint. The previously validated Finnish Type 2 Diabetes Risk Score questionnaire was used to identify high-risk individuals for the development of T2DM. Identification of high-risk individuals through a questionnaire that requires minimal effort to complete is also a great advantage from a community standpoint, as it can be easily implemented in routine primary care.

The five prevention goals from the Finnish Diabetes Prevention Study comprised the core intervention goals of the sessions. In particular, the aim was to enable participants to make informed and reasonable changes with regard to their diet, namely (a) to reduce saturated fat and trans fatty acids consumption, (b) to decrease simple sugars and sweets intake, and, in order to increase the daily fibre intake, (c) to reduce consumption of refined cereals and (d) to eat at least 5 portions of fruits and vegetables per day.

In Greece two types of settings were generally used for the distribution of the questionnaires and implementation of the intervention procedure: primary-care settings and occupational settings (six centres from each type). The 1-year intervention programme consisted of six sessions (1 h each) held by a registered dietician at the area of the participants' residence or work. Groups of 6–10 persons were constructed. In every session, information on healthy lifestyle, personal discussion and written material were provided, analysing the concept of the disease risk in general and the individual risk in particular. Although no formal exercise sessions took place, during all sessions, potential lifestyle changes regarding physical activity were discussed, aiming at 30–40 min, 5 times per week of moderate intensity aerobic exercise (i.e. brisk walking, light jogging, swimming). Participants were invited to express their ideas about how to incorporate small and frequent bouts of the aforementioned aerobic exercise in their daily programme.

The intervention strategy (six group sessions with a dieticians per year at the site of work or near the residence of the participants) was practical from a community standpoint and feasible in routine primary care. Social support was emphasised by the group setting and participants were also encouraged to involve their own social environment in the lifestyle changes.

These types of initiatives can also be expected to help reduce risk for other chronic conditions such as obesity, cancer and cardiovascular disease.

To which type of interventions does your example of good practice belong to?

European or international project (i.e. implemented in several countries)

How is this example of good practice funded?

European funding

What is/was the level of implementation of your example of good practice?

Local/urban

Did the intervention develop strengths, resources and autonomy in the target population(s)?

One particular goal was that all participants in the intervention group should obtain the necessary knowledge and understanding about how to influence their blood glucose level in everyday life. The education approach was based on the principles of empowerment, including participation and cooperation without assuming responsibility for the other person's performance, and accepting without judging the other's feelings and choices.

What are the main results/conclusions/recommendations from the evaluation?

This non–intensive intervention strategy (six group sessions with a dietitian per year at the site of work or near the residence of the participants) was found practical from a community standpoint and feasible in routine primary care. Weight reduction was modest beneficial effects were noted on glycaemic status.
At study end, participants reported decreased whole fat dairies and processed meats consumption sugars and refined cereals. Participants who improved their diet, decreased body, plasma triglycerides and 2-h post-load plasma glucose compared to those who had worsened their dietary habits. The implementation of a group-based, non-intensive dietary counselling proved to be practical and feasible in ''real-world'' community settings and was accompanied by favourable dietary changes and health benefits.
Cost-effectiveness will be assessed from the general DE-PLAN project

What were, in your opinion, the main lessons to be learned?

There has been a shift in preventive health care, from information and influence to empowerment, and more dialogue and participation. An important part of recent health promotion ideology is an increased emphasis on process as much as on results and on understanding the relationship between behaviour and health. This health promotion ideology reflects characteristics in the relationships between the provider and the recipient, and might entail cooperating and accepting without judging the other's performance, feelings and choices.

References to the most important articles or reports on the intervention

- Implementation and effectiveness of the first community lifestyle intervention programme to prevent Type 2 diabetes in Greece. The DE-PLAN study . Makrilakis et al. Diabet Med. 27, 459–465 (2010)
- Changes in dietary habits and their association with metabolic markers after a non-intensive, community-based lifestyle intervention to prevent type 2 diabetes, in Greece. The DEPLAN study. Kontogianni et al. Diabetes Res Clin Pract. 2012 Feb;95(2):207-14.
The study in other countries:
- The InnvaDiab-DE-PLAN study: a randomised controlled trial with a culturally adapted education programme

improved the risk profile for type 2 diabetes in Pakistani immigrant women. Telle-Hjellset et al., British Journal of Nutrition (2013), 109, 529–538
- Prevention of type 2 diabetes by lifestyle intervention in primary health care setting in Poland: Diabetes in Europe Prevention using Lifestyle, physical Activity and Nutritional intervention (DE-PLAN) project. Gilis-Januszewska et al., British Journal of Diabetes & Vascular Disease July/August 2011 vol. 11 no. 4 198-203
- Feasibility and effectiveness of the implementation of a primary prevention programme for type 2 diabetes in routine primary care practice: a phase IV cluster randomised clinical trial. Sanchez et al. BMC Family Practice 2012, 13:109

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