

From North Karelia to Latin America – a 40 year journey

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In the 1970's, the province of North Karelia in Eastern Finland had the highest cardiovascular disease (CVD) mortality rate worldwide in men between 35–64 years of age. This was mainly due to an unhealthy lifestyle consisting of high smoking prevalence, little physical activity and unfavorable nutritional habits consisting of a high intake of saturated fats, salt and low consumption of fruits and vegetables. Once the population of North Karelia realised that they die younger than others, they asked for urgent national help.

In 1971 the Finnish government decided to set up the first population-based intervention project that finally began in 1972 under the leadership of professor Pekka Puska¹. The main objective of the North Karelia project was to decrease CVD mortality by changing the lifestyle habits and risk factors of CVD in the entire population of the province (approximately 200,000 people). The strategy was to create a large network within the community consisting of physicians, nurses, teachers, nutritionists, and politicians, as well as various political institutions, private and public companies, and non-governmental organisations (NGO). The underlying concept was, that in order to have a large impact in the community, each partner should provide his area of expertise to the project in order to contribute to the success of the entire project. The local newspapers and national TV helped in disseminating health information to the community as the first step of changes in lifestyle habits is knowledge regarding the relationship between the effects of a poor diet and smoking on risk factors of CVD such as cholesterol, blood pressure and obesity. More than 1,500 articles regarding a healthy lifestyle were published in the local newspapers during the first five years of the project. NGOs and health-care professionals provided the necessary skills to people on how to change to a healthier diet, how to stop smoking and how to increase physical activity and assisted them to stay motivated to maintain these changes. As changes in lifestyle habits are very difficult if there is no environmental support, the project team worked together with the food industry to develop healthier nutritional products such as low-fat meat, ice-cream, skimmed milk and a margarine containing fytosterols that decreases the serum cholesterol by reducing the absorption of cholesterol in the intestine. In addition, it was agreed with the supermarkets on how and where to place the healthier products in their shops as product positioning and pricing

Abstract

VON NORDKARELIEN NACH LATEINAMERIKA – EIN 40 JAHRE LANGER WEG

In den 70er Jahren des letzten Jahrhunderts verzeichnete die Region Nordkarelien im Osten Finnlands die international höchste Sterblichkeitsrate auf Grund von Herz-Kreislauf-Krankheiten bei Männern im Alter von 35–64 Jahren. Daher beschloss die finnische Regierung im Jahr 1972 erstmals ein bevölkerungsweites Interventionsprojekt durchzuführen, um die Lebensgewohnheiten zu verbessern und die Risikofaktoren für Herz-Kreislauf-Erkrankungen in der Bevölkerung zu bekämpfen. Die zentralen Elemente des Projekts in Nordkarelien bestanden in der Schaffung eines großen Netzwerks innerhalb der Gemeinschaft, der Reorganisation der örtlichen Gemeinschaft, gemeinschaftsweiten Aufklärungskampagnen in Verbindung mit der Vermittlung von Fähigkeiten, der Motivierung zur Verbesserung der Lebensgewohnheiten sowie in der Änderung von Rechtsvorschriften. Darüber hinaus stärkte das Projekt den Patriotismus in der Region, da sich die Menschen damit identifizierten. Innerhalb von 20 Jahren ist die Mortalitätsrate bei Herz-Kreislauf-Krankheiten bei Männern und Frauen stark gesunken (65%). Die wesentlichen Faktoren, die den beobachteten Veränderungen zugrunde liegen, waren eine Senkung der Cholesterinwerte, eine geringere Verbreitung des Rauchens und niedrigere Blutdruckwerte. Die im Februar 2010 gegründete Stiftung zur Prävention und Bekämpfung chronischer Krankheiten in Lateinamerika (FunPRECAL) hat sich zum Ziel gesetzt, ein großes Kooperationsnetzwerk aus Universitäten, NGOs, Ministerien und privaten Unternehmen aufzubauen, um die Durchführung von Aktivitäten zur Gesundheitsförderung und -vorsorge im Bereich der nichtübertragbaren Krankheiten auf Grundlage der Erfahrungen aus dem Nordkarelien-Projekt zu erleichtern. Zurzeit verfügt FunPRECAL über Kooperationspartner in zehn lateinamerikanischen Ländern, Finnland sowie in Spanien, und setzt erfolgreich verschiedene Projekte in den Bereichen Gesundheitserziehung, Prävention von (Gestations-) Diabetes und Ausbildung von Gesundheitsmitarbeitern in Lateinamerika um. Für die Jahre 2011 und 2012 sind bereits mehrere neue Projekte geplant.

affects very much what people buy. In addition, several new legislations were introduced. Already in 1977, Finland had the first anti-tobacco legislation restricting sales of tobacco to minors (the first age limit was 16 years of age), a complete ban on tobacco advertising and smoking restrictions in public places. Furthermore, it was decided by law that each nutritional product required a food label indicating the amount of salt, calories and fats it contains to aid the customer to choose a healthier product.

Within 20 years, the CVD mortality rates decreased in men and women by 65% – a world record! The major underlying factors of the observed change were the decreases in serum cholesterol (–40 mg/dl), smoking prevalence (from 50–30% in men) and blood pressure (5–7 mm Hg) attributing more than 50% of the reduced CVD mortality².

The key elements of the North Karelia project were creating a large community network, reorganising the local community, community-wide education campaigns combined with skill training and motivation on how to improve the lifestyle habits together with legislative changes. Furthermore, the project created a large local patriotism as the people identified themselves with the project. After the first ten years, in 1982, the North Karelia project was extended to other provinces of Finland as well. Later on the project was exported to Europe (MONICA) and the World Health Organisation (WHO) tried to implement it in various parts of the world, however, with little success in Latin America³. Thus, a need arose to organise something similar in Latin America due to the increasing burden of CVD in the Latin American population.

The Foundation of Prevention and Control of Chronic Diseases in Latin America (Fundación para la Prevención y Control de las Enfermedades Crónicas No-Transmisibles en América Latina; FunPRECAL) was founded in February 2010. FunPRECAL currently has collaboration partners in ten Latin American countries: Argentina, Brazil, Colombia, Cuba, Ecuador, Guatemala, Mexico, Paraguay, Peru and Uruguay. The mission of FunPRECAL is to create a large collaboration network between universities, non-governmental organisations, ministries and private companies to ease the implementation of health promotion and primary prevention activities in the field of non-communicable diseases (NCD) based on the experiences of the North Karelia Project. Several projects are already ongoing. In



Mar del Plata, Argentina, 40 health promoters have been trained in the «Guardacorazon» project. This particular project has been financed by the Pan-American Health Organization (PAHO) and was implemented in the Santa Rita neighborhood which has a population of 30,000 people. Over a period of several months, approximately 30 people from the community were selected and trained using a specially developed teaching manual covering the most important topics of NCD prevention. These topics covered among others blood pressure, cholesterol, diabetes, healthy nutrition, physical activity and mental health. Finally, 20 health promoters finished the training and were partly integrated in the local health-care center in order to educate the community about NCDs. FunPRECAL is planning to implement the Guardacorazon project in other countries of its network during the upcoming years. In

Barranquilla, Colombia, there are two large diabetes prevention projects going on. The first one, DEMOJUAN, is co-financed by a grant of Lily Diabetes (BRIDGES). The projects identify people at high risk of type 2 diabetes using a screening questionnaire (Finnish Diabetes Risk Score; FINDRISK) followed by a blood test in those who were screened positive (<13 points). The questionnaire consists of eight questions regarding body weight, family history of diabetes, physical activity and some other risk factors of type 2 diabetes⁴. The FINDRISK has been validated in several countries in Europe but never in Latin America. The people at high risk are given health education on how to change to a healthier nutrition and how to increase physical activity by trained nutritionists and physical activity experts. The main target is weight control and regular physical activity in order to prevent type 2 diabetes. The project uses the latest scientific results and experience of the past ten years⁵⁻⁷.

The second project in Barranquilla, VIDA NUEVA, is a large project funded by a grant from the World Diabetes Foundation and Novo Nordisk A/B within the city of Barranquilla (1,500,000 inhabitants). The project's main aim is to improve the health of women by decreasing gestational diabetes. Gestational diabetes is the glucose metabolism disorder occurring during pregnancy and bears a high risk for the women and the baby. Unfortunately, gestational diabetes is increasing worldwide due to the epidemics of obesity due to unhealthy nutritional habits and a lack of physical activity. The Vida Nueva project will work out new gestational diabetes management and control guidelines, implement them by training the health care personnel and organise educational information campaigns among pregnant women on how to decrease gestational diabetes. The project will start in October 2011.

In Paraguay, FunPRECAL is involved in the creation and implementation of the first national doctoral degree programme (started in 2010) at the University del Este in Ciudad del Este.

One of the most recent projects of FunPRECAL is Exercise Is Medicine (EIM), a project lead by the Center of Disease Control (CDC) in Atlanta. The project aims at training physicians in writing physical activity prescriptions, teaching them about the scientific evidence of the benefit of physical activity in all patients and the general population. FunPRECAL will organise several courses on physical activity and physical activity prescription using the internet platform Moodle.

Despite being a very young organisation FunPRECAL has managed to build up a large network

within organisations, universities, industry and the local populations as well as national ministries of health in a very short time. The goal of FunPRECAL is to cover all of Latin America within our network by the end of 2012 and to raise more funding for its projects.

Finally, what started almost 40 years ago in Finland, has arrived to Latin America. I am confident that if everybody is working together, contributing his skills and experiences to the network and its activities, we can have a major impact on improving the lifestyle habits and decreasing the risk factors of NCDs in the Latin American population. ■

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