

A Compendium of Best and Promising Practices for Heart Health and the Prevention of Cardiovascular Disease, Stroke and Diabetes

Women Channel



ACKNOWLEDGEMENTS

The Compendium of Best and Promising Practices for Diabetes, Cardiovascular Disease, Stroke Prevention and Heart Health was developed based on the work of the Health Behaviour Research Group at the University of Waterloo. The *Compendium* is an edited and condensed version of several large reports produced by an extensive team of researchers and writers on the original project. The material is not new and all credit for the content is due to the writing teams that produced the reports listed below.

OVERALL DIABETES REPORT

[Best Practices in Type 2 Diabetes Prevention Report](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (May 2004). International Best Practices in Type 2 Diabetes Prevention, (Project Final Report and Appendices), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

[Best Practices in Type 2 Diabetes Prevention-Appendices](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (May 2004). International Best Practices in Type 2 Diabetes Prevention, (Project Final Report and Appendices), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

[Best Practices in Type 2 Diabetes Prevention -Dissemination Report](#)

Skinner, K., Manske, S. (May 2004). International Best Practices in Type 2 Diabetes Prevention, (Dissemination Report), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

NOMINATED PRACTICES SCAN

[Nominated Scan Project Summaries](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (January 2004). International Best Practices in Type 2 Diabetes Prevention, (Nominated Scan Project Summaries), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

WOMEN CHANNEL

[Women channel summary](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (October 2004). International Best Practices in Type 2 Diabetes Prevention, (Women Channel Report), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

[Women project summaries](#)

Hanning, R.M., Manske, S., Skinner, K., McGrath, H., Heipel, R. (October 2004). International Best Practices in Type 2 Diabetes Prevention, (Women Channel Project Summaries), Waterloo, Ontario, Canada: Health Behaviour Research Group, University of Waterloo for the Heart Health Resource Centre, Ontario Public Health Association (funded by Health Canada).

Best and Promising Practices – Women

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Matrix of Women Programs Overlapping with Other Channels

Best Practices

Program	Aboriginal	African American	Community	School	Stroke	Worksites
<i>Coeur en Sante St.-Henri</i>			✓		✓	
<i>Health Works for Women (HWW)</i>						✓
<i>PATHWAYS</i>		✓	✓			

Promising Practices

Program	Aboriginal	African American	Community	School	Stroke	Worksites
<i>12-wk structured weight loss program, A</i>			✓			
<i>Choose to Move</i>			✓			
<i>Diet and Exercise in the Treatment of Obesity: Effects of 3 Interventions on Insulin Resistance</i>						
<i>Ottawa Heart Beat</i>			✓		✓	✓
<i>Primary Prevention of Weight Gain</i>			✓			
<i>Sioux Lookout Diabetes Program</i>	✓		✓	✓		
<i>Stromstad Primary Health Care Intervention for Women</i>						
<i>Well-Integrated Screening and Evaluation for Women in Massachusetts, Arizona and North Carolina (WISEWOMAN)</i>			✓		✓	
<i>Women's Healthy Lifestyle Project</i>					✓	

Source

Direction de la santé publique de Montréal-Centre – Montréal, PQ.

Overview

Coeur en santé St-Henri was a community-based cardiovascular disease (CVD) prevention program conducted in a predominately Francophone, socio-economically disadvantaged urban community from 1992 to 1997. The program was initiated by the Department of Public Health at the Montreal General Hospital because of the high rate of CVD risk factors and mortality in the area. Its long-term goal is to decrease CV morbidity and mortality through reduction in the prevalence of major CVD risk factors including smoking, hypercholesterolemia, hypertension, physical inactivity and obesity.

The target group was male and female adults aged 18 to 65 years, of low education and low socio-economic status. In many of the interventions, women were the focus, with the intention that their familial roles would elicit positive health behaviour changes in men and children. Coeur en santé St-Henri is one of the poorest urban communities in Canada and was seen as an ideal setting to conduct research into the feasibility and impact of a health promotion program.

The program evaluated the impact of the interventions in St-Henri with a nearby matched comparison community (Centre-Sud).

Results/Outcomes

The objectives of the program were:

- To reduce the prevalence of smoking
- To reduce the prevalence of dietary fat consumption
- To increase the level of physical activity

Program impact was evaluated in two study designs: a 3-year repeat independent sample survey and a 5-year longitudinal cohort sample survey, both of which compared levels of modifiable behavioural risk factors among the intervention and the matched comparison community. Data were obtained in simple random samples drawn from the telephone directory.

Data were collected on self-reported behavioural risk factor outcomes obtained from 35-minute telephone interviews in both the intervention and comparison communities. Not all of the data collection methods were validated and relied entirely on self-reports from telephone surveys.

Few significant program effects were reported with the exception that in the longitudinal (5-year) cohort sample there were increases in the proportion of individuals who reported cholesterol checkups. Although few overall program effects were reported, several individual interventions were successful with respect to their objectives. However, low recruitment and problems with sustainability limited their effectiveness.

One of the most important contributions of the project was the demonstration of the feasibility and utility of a simple, low-cost evaluation, which despite its limitations could yield important information for public health departments.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Stroke
- Type 2 Diabetes
- Hypertension

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition

Setting

- Community at Large
- Grocery Stores
- Hospital-based
- In home
- Restaurants

Program Description

Key activities included:

- Smoking cessation workshops – six 2-hour sessions delivered by trained lay facilitators at three local community groups
- Smoking cessation contest – mediated through the local newspaper
- 20-week Heart Health recipe contest – through the local newspaper
- Heart Health nutrition education workshops – 6 2-hour sessions developed by a nutritionist from the local health and social services centre and delivered by training lay facilitator at three local community groups
- Health weight regulation workshop – eight 1-hour sessions aimed at promoting development of a positive body image and delivered by trained lay facilitators at three local community groups
- Menu-labeling in two local restaurants – heart healthy food choices labeled on menus and offered at discounted prices

Audiences

- Adults (19-64 years)
- Adults Female (19-64 years)

Audiences Characteristics

- Individuals Living in Low Income Situations

Approach

- Awareness
- Education
- Environmental Support

- Point-of-choice nutrition education campaign – in five local grocery stores consisting of taste-testing, CVD risk factor screening, guided grocery store tours, lotteries, distribution of educational materials and recipes
- Walking club – met 2-3 times/week to walk 40-50 minutes
- Screening for CVD risk factors – screening clinics held in local health clinics and during community events with participants visiting 7 stations sequentially to assess risk, followed by consultation with a nurse or physician
- Direct mail print educational materials – monthly newsletter mailed to all households in St-Henri (over 12,000) and 17 healthy weight regulation pamphlets mailed twice/week to participants' homes
- Heart Health videocassettes – six videos on CVD risk factors broadcast on local cable television and distributed by local video clubs and community groups
- Weekly doctor's column – appearing in a local newspaper

Resources

Several print education materials (available in French and English) were produced for the project including:

- Workshop and course materials
- Self-help materials
- Information newsletters
- Mailings
- Films, videos

Other Information

The cost for the community-wide intervention (5-year) program was approximately \$775,000 Canadian dollars, plus \$725,000 for the evaluation component. The program cost included three full time staff.

The channels/settings for the interventions were varied and included:

- Homes
- Health care settings
- Restaurants/grocery stores
- Community at large
- Electronic and print media

Risk factors addressed by the program included:

- High blood pressure
- Sedentary lifestyle
- Unhealthy eating
- Smoking
- High cholesterol
- Obesity
- General heart health

Many of the interventions used a collaborative approach. In-depth consultations were conducted with community leaders and organizations contributing to increase partnering/networking/coalition-building between organizations. It was difficult to sustain the intervention due to lack of funds, lack of interest and competing priorities.

Although the interventions were geared to low education, low-income individuals in urban communities, many activities are generalizable and could be integrated into other community heart health-stroke prevention programs. Given the lack of significant program effects, future projects should focus on approaches that emphasize wide-scale community participation and emphasize long-term sustainability.

Some of the explanations provided for lack of program effects include:

- Consistently low levels of participation in program activities
- The possibility that interventions might not have been sufficiently intense or effective in achieving behaviour change
- Methodological problems that may have limited the ability to detect a community-level impact (for example, data collection and contamination of comparison community)

References

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Richard, L., O'Loughlin, J., Masson, P., & Devost, S., (1999). Healthy menu intervention in restaurants in low-income neighborhood: A field experience. *Journal of Nutrition Education*, 31, 54-59.

Source

West Virginia University; Universidad de la Frontera (Temuco, Chile)

Overview

The Health Works for Women (HWW) program is a randomized trial designed to assess the impact of a worksite intervention on improving multiple health behaviours among rural female blue-collar employees in North Carolina. Nine small to mid-sized workplaces were randomly assigned to either intervention or delayed intervention conditions. The intervention consisted of: the distribution of two computer-tailored magazines designed to present personalized feedback, strategies for change, and community resource information based on personalized health behaviour priorities; and a natural helpers program that trained women in the workplace to distribute information and provide support for healthy behavioural change.

The delayed intervention worksites received one tailored magazine. The intervention took place over 18 months.

The target audience included minority blue-collar female employees of small to medium-sized textile or light manufacturing worksites. The participants had to be 18 years of age or older and fluent in either English or Spanish. In the study sample, 53% of women were aged 40 or younger, 58% were African-American, the majority were married and had a high school education or greater. Participants were generally overweight with a BMI of approximately 29 kg/m².

Results showed that the intervention group increased fruit and vegetable consumption and improved in strengthening and flexibility exercise compared to the delayed intervention group. At 18-month follow-up there were no differences between groups for dietary fat consumption, aerobic exercise, breast and cervical cancer screening, and smoking cessation.

Results/Outcomes

The goal of the project was to determine whether a two-pronged worksite intervention consisting of health magazines and a natural helper program would improve multiple health behaviours among female blue-collar workers. The behavioural intervention goals included:

- Increase fruit and vegetable consumption
- Decrease dietary fat consumption
- Increase physical activity (aerobic, strengthening, and flexibility exercise)
- Smoking cessation

- Regular breast and cervical cancer screening
- Weight loss

The objectives of the program were:

- To read computer-tailored magazines which were provided to participants at baseline and at 6-month follow-up
- To choose behaviour change priorities to receive tailored health messages
- To approach the natural helpers for information/support regarding health behaviour changes

The study included formative evaluation, a pilot study to pretest the health magazines, process evaluation and outcome evaluation.

The formative evaluation included focus group interview results in combination with literature and expertise of the project team to develop appropriate message content, language and literacy level for the tailored messages. The formative research also determined that women's magazines were a primary source of health information for the target population and that women in the blue collar workplaces had a group identity and preferred messages and activities that were multi-ethnic. This information helped in the design of the magazines. A final part of the formative evaluation was the use of focus groups with the women who were being trained as natural helpers. The groups helped in the development of culturally appropriate training manuals and educational materials.

The process evaluation measured women's recall, readership and personal relevance of the magazines. Results from the 18-month follow-up showed that 86% of women in the Intervention group recalled having received the tailored information and reported higher recall, readership and personal relevance of the magazines than the Delayed group.

Additional process measures included:

- Recording how many women had heard about the program at the workplace
- The frequency with which they received written materials, discussed health issues and met with natural helpers for group activities.

Only 29% of women heard about the program at the workplace. Exercise and healthy eating were the most frequently cited health behaviours around which women reported that they interacted with the natural helpers.

Results of the Outcome evaluation showed:

- The Intervention group had increased fruit and vegetable consumption by 0.7 daily servings at the 18-month follow-up (no change in the Delayed group)
- No significant difference in fat intake at 18 months (only at 6 months)
- The Intervention group demonstrated improvements in strength and flexibility compared to the Delayed group
- Rates of smoking cessation and cancer screening did not differ between groups

A possible drawback to tailoring messages to behavioural priority is that women may not choose a behaviour, such as smoking, that could have the highest objective impact on decreasing health risks. It is recommended that future research investigate the role of choice as a variable for tailoring interventions aimed at changing multiple behaviours.

An important limitation of this study is the fact that the Delayed group received a partial intervention (one tailored message) after the 6-month measurement point. The observed differences between the two groups at 18 months may have been attenuated if the Delayed intervention had some effects on behaviour.

Recommendations for future research include:

- Replicate with a larger sample of workplaces and women, and address adaptation of the program to include male workers and other ethnic groups and industries
- Focus on other levels of change, such as the organization, environment, and/or policy level, which may be needed in order to impact behaviours such as smoking among blue-collar women

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Type 2 Disease

Audiences

- Adults Female (19-64 years)

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition

Audiences Characteristics

- Peer Support/Educator

Setting

- Media
- Worksites

Approach

- Awareness
- Education
- Environmental Support

Program Description

Ten worksites were recruited into the study. One served as a pilot site and 9 served as study sites. Of the study sites, 4 were randomized to the Intervention group and 5 to the Delayed Intervention group.

Employees of all worksites were asked to complete a self-administered baseline survey during work time, which took 30-40 minutes. The percentage of women who completed the survey at each worksite was an average of 73%. Survey measures included demographic information, health behaviours such as diet, physical activity, smoking, cancer screening, and the personal behaviour subjects wished to target in the study. Participants also completed 6- and 18-month follow-up surveys.

Details of the Intervention Group Activities

Two individually-tailored computerized magazines were provided to all participants, the first after filling out the baseline survey and the second after completing the 6-month follow-up.

These messages were tailored primarily based on women's personal health concerns and current health behaviours.

Women at each worksite were identified for the natural helpers program using several different methods. Natural helpers received training on health topics including nutrition, fitness and exercise, stress management, cancer, and weight management. They were expected to provide health information to co-workers and to organize worksite health activities such as walking groups.

Details of the Delayed Intervention Activities

During the first 6 months of the study, the Delayed Intervention worksites were offered health education sessions for their employees on topics not directly related to study objectives, however none of the worksites chose to take advantage of these. After completing the 6-month survey, the Delayed Intervention group received one individually tailored magazine. They did not have the natural helpers program at their workplaces.

Resources

Three main resources were developed for this program:

- Women's magazines containing health messages that were computer-tailored based on individual's health concerns and behaviours
- An extensive message library of text, graphics, and photographs that corresponded with each survey question selected for tailoring, and its possible response options
- Training manuals and educational materials used to train natural helpers

Other Information

Staff and volunteer time was not reported. Costs were unknown. Collaboration among study researchers, worksites, and employees who acted as natural helpers was necessary for program implementation. The natural helpers were women from the worksite who were trained as lay health advisors.

The commitment of the worksite is important for program success. Unfortunately, almost half of the eligible workplaces would not commit to participate during the recruitment process. Furthermore, despite signing a contract to indicate they would allow all interested employees to complete all surveys during work time, one site did not do so during the 6-month follow-up survey and four sites did not do so during the 18-month survey.

HWW was designed to fit with other interventions. It is based on a system's approach to worksite health programs that involves the incorporation of multiple levels of influence and health promotion programming.

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multiple health behaviors among blue-collar women. *American Journal of Health Promotion*, 14(5), 306-313.

Source

Chicago Diabetes Research Center

Overview

The target group for PATHWAYS is urban African American women. The purpose of the program was to test the effectiveness of a socio-cultural weight loss program that was delivered by lay facilitators in urban churches. The main objective of the program was to motivate urban African American women to lose weight by:

- Reducing intake of dietary fat
- Increasing intake of dietary fibre, and
- Implementing an exercise regimen

Results/Outcomes

There were two levels of evaluation in this project: process and outcome evaluation.

The process evaluation focused on the lay facilitators and measured them according to three dimensions:

1. Degree to which they delivered the program as designed and intended
2. Participant interest and satisfaction (measured by participant rates)
3. Degree of weight loss among participants

The evaluation showed that the lay facilitators were highly consistent in program delivery and maintained program fidelity throughout. Both participant attendance and completion rates were high.

To measure outcomes, data were collected at the beginning of the program and one week following completion of the program. Participants' weight and height were measured for both intervention and control groups. Two tools were administered as part of the outcome evaluation:

- The Food Behavior Checklist (to assess the degree to which common high-fat and high-fibre foods were consumed), and
- The PATHWAYS Weight Loss Behavior Index (to measure behaviour and attitudes associated with successful weight loss).

Participants lost an average of 8.3 pounds/10 pounds compared to the control groups that gained an average of 1.9 pounds. The results were statistically significant.

Prevention of Chronic Disease and Conditions

- Type 2 Diabetes
- Overweight/Obesity

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition

Setting

- Community at Large

Audiences

- Adults Female (19 – 64 years)
-

Audiences Characteristics

- African American
- Peer Support/Educator

Approach

- Education

Program Description

PATHWAYS consists of 14 weekly sessions, each lasting 90 minutes. Lay facilitators are trained to work with small groups through guided learning activities and small group instruction. The motivation for weight loss is health benefits and general well being as opposed to physical attractiveness.

Of the 39 obese women recruited for the project, 19 were assigned to the intervention group and 20 were assigned to a waiting list (control group).

Volunteer lay facilitators received 9 hours of training that covered the structure and process of the program and training in group facilitation. They were given the opportunity to conduct three of the program sessions and were supported by research staff that provided feedback on content and style of their presentations.

A key task of the facilitators was to assist participants in setting individualized, weekly behaviour change goals relating to eating behaviour. Participants discussed progress toward their goals and worked together on problem-solving techniques for addressing obstacles. Each participant was encouraged to initiate an at-home exercise program that consisted of recreational walking.

Resources

An Instructor's Manual is available as a resource from the PATHWAYS Project. It contains learning objectives, instructor scripts, and participant materials.

Other Information

In addition to the success evident through the outcome evaluation, PATHWAYS was deemed successful because of several unique aspects of the project. First, facilitators within the project treated the participants as adult learners, which led to an increased sense of self-efficacy among participants.

The second key to success was involving individuals from the target community and training them to implement the program. This ensured that the staff in the program were familiar with

the participants' culture and social structures and therefore were able to develop rapport with the group quickly. It is believed that using facilitators from within the community increases access to hard-to-reach populations. Using lay facilitators in this setting demonstrated that it is not essential to create content experts. Prepared scripts are helpful in informing the facilitators. The greatest advantage to partnering with lay facilitators in program implementation is realized in their ability to understand, access and provide service to hard-to-reach populations.

Another key to success is the support for PATHWAYS that came from the church communities. Their support was seen as critical to program implementation.

There is no mention of the amount of staff resources or costs required to implement the program. It is also not known how generalizable PATHWAYS would be within a Canadian context.

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Source

Tufts University School of Medicine and the Center for Clinical and Lifestyle Research and the Department of Exercise Science, University of Massachusetts.

Overview

This study recruited moderately overweight women aged 20-49 from the general population. No other details about the groups were provided.

The purpose of the intervention was to assess the psychological effects, impact on quality of life, and behaviours in overweight women who followed a practical approach to weight loss over a 12-week period. Women were randomly assigned to either a weight loss intervention group (involving physical activity, a self-selected hypocaloric diet, and groups support) or a control group. Evaluations were conducted on weight, body composition, cardiovascular fitness, physical activity, psychological profiles such as State-Trait Anxiety and Self-Esteem, quality of life, and nutrition.

The Intervention group lost significantly more body weight and body fat than did controls. Also, physical activity levels and various quality of life indices improved in the Intervention group only.

Results/Outcomes

The Research Goals was: to study the effects of a 12-week weight loss strategy on psychological well-being, quality of life, and behaviours in moderately obese women.

The three Weight Loss Intervention Goals were:

1. To adhere to a self-selected hypocaloric diet with a caloric range of 33258 to 41462 KJ/week
2. To increase self-selected physical activity to a total caloric expenditure of ≥ 6279 KJ/week, through moderate intensity walking and other activities
3. To take a multi-vitamin each day to ensure nutritional adequacy

Program objectives included:

- To self-monitor and record dietary intake
- To attend weekly meetings for group support and discussion

The Intervention group lost significantly more body weight and body fat than did controls. In addition, physical activity levels and various quality of life indices (perceived physical function, vitality, and mental health) improved in the Intervention group compared to the Control group.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Overweight/Obesity

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition

Setting

- Community at Large

Audiences

- Adults Female (19-64 years)

Approach

- Education
-

Program Description

Subjects were recruited through newspaper advertisements and flyers posted in public areas. Eighty women aged 20 to 49 years who weighed between 20% and 50% more than the 1983 Metropolitan Life Insurance Table of desired weight for height participated in the study.

Subjects who were randomly assigned to the Intervention group were asked to adhere to a clearly defined self-selected hypocaloric diet and self-selected physical activity for a 12-week period. Subjects also participated in weekly group support sessions.

Those in the Control group were asked to maintain their current nutritional practices and physical activity patterns throughout the study period.

The Intervention activities were drawn from the Weight Watchers International program and included:

- A self-selected hypocaloric diet
- Self-selected exercise
- Attendance at weekly meetings for group support at which food diaries were reviewed, weekly exercise discussed, and encouragement given to subjects experiencing difficulties. A trained lay leader who had lost and was maintaining a healthy weight on the weight loss program facilitated these meetings.
- Education regarding behaviour modification techniques
- Problem solving and coping skills for weight loss challenges

Resources

None mentioned.

Other Information

The Weight Watchers program would need to be made more universally accessible to widen the program's impact. This could be done through a reduction or elimination of the program fee.

The only information about staff concerned the use of a trained lay facilitator to lead group meetings.

It is not known how generalizable the program is to all groups, since the number of subjects completing the study is small. Further research is required in a controlled environment to determine results regarding program efficacy.

References

Rippe, J. M. et al. (1998). Improved psychological well-being, quality of life and health practices in moderately overweight women participating in a 12-week structured weight loss program. *Obesity Research*. 6(3), 208–218.

Source

American Heart Association

Overview

Choose to Move was a prospective, non-randomized, 12-week educational intervention designed by the American Heart Association (AHA) for women across the United States. Participants were recruited by direct mail, health care providers, and other means. They were sent a welcome kit and manual that contained 12 weekly behavioural modification topics and information tailored to women. The information was intended to help women managed cardiovascular disease risk factors and to build a support system for lifestyle change. Participants monitored their progress every two weeks and reported back to AHA every two weeks. Those who completed the evaluation reported that they significantly increased their levels of physical activity, reduced their consumption of high-fat foods, and increased their knowledge and awareness of cardiovascular disease risk and its symptoms. Choose to Move targeted women aged 25 years or older who wanted to become more physically active. Over 50% of participants were between 35 and 54 years old and 90% were Caucasian. Almost half had 2 to 3 risk factors for heart disease or stroke.

Results/Outcomes

The Research Goal for the program was to determine whether the Choose to Move intervention program would increase women's physical activity and improve their nutrition, and improve their knowledge of heart disease and stroke.

The Intervention Goals were:

- To increase the proportion of women who met national recommendations for physical activity and consumption of high-fat foods
- To increase daily physical activity to a minimum of 30 minutes
- To decrease consumption of high-fat and high-cholesterol foods, and limit excess energy intake
- To increase knowledge of risk factors for CVD and symptoms of heart attack and stroke

The program objectives were:

- To complete and send in biweekly follow-up evaluation summary cards to the AHA
- To self-monitor daily physical activity and dietary intake

Choose to Move was piloted in 1998, however information about the pilot was not provided. The Impact evaluation revealed that the proportion of women correctly identifying heart disease as the leading cause of death increased from 84% to 91% at week 10 follow-up. There were 23,171 women registered for the program and 3775 respondents at the end of week 10.

The primary outcome of the study was change in physical activity levels and dietary habits from baseline to follow-up. Among the participants who completed the week 12 follow-up evaluation, the percentage who reported being active (at least moderate exercise ≥ 5 times per week) increased from 32% at baseline to 67% at program's end. Participants currently limiting excess calories or fat increased from 72% to 91% at week 10 follow-up evaluation.

When the women who completed the 12-week follow up survey (evaluation cohort) were compared with the women who completed only the baseline survey (registration cohort), the evaluation cohort reported significantly more physical activity, and using more strategies to improve both their physical activity and nutrition.

Very few women who registered for the program actually completed it. Therefore, adequate support needs to be given to encourage adherence to the program. It is also important to ensure the availability of free or low-cost physical activity/recreation opportunities in the community (e.g. walking trails, bike paths, sports fields, YMCA).

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition

Setting

- Community at Large
- In home
- Media

Audiences

- Adults Female (19-64 years)

Approach

- Education

-

Program Description

Registered participants received a welcome kit that included program materials and a bookmark. The handbook included 12 weekly behavioural modification topics and information tailored to women. The program was designed to teach women how to incorporate a daily routine of physical activity into their lives in creative and practical ways.

At the beginning, participants began with 10 minutes per day of moderate-intensity physical activity. At week 5, eating behaviours were addressed and by the eighth week, women were encouraged to do 30 minutes of physical activity daily.

The program offered information to help participants increase their physical activity and manage their cholesterol level and weight by building a strong support system of family and friends. Special messages were included to help women at high risk for heart disease and stroke.

The AHA encouraged women through postcard messages, emails, and a newsletter. Participants could access additional information on the AHA website. Those who completed the program and sent in a final summary card received a Choose to Move t-shirt and certificate.

A post-program newsletter reinforced participant in maintaining the behavioural stage of change they had achieved.

Resources

Two types of resources were developed for the program:

1. A program handbook containing the 12 weekly behavioural modification topics
2. Postcards and newsletters, which were sent out to participants encouraging them to continue the program

Other Information

Costs were minimal since it was mail-based.

The program is seen as a simple, cost-effective way to increase physical activity among women. It could fit with other interventions such as community recreation programs or could serve as a catalyst for more intensive interventions.

This program may have advantages for women over more structured formats, such as group sessions that require greater time, transportation, staff involvement and considerable costs. Future efforts should explore opportunities to reach a more heterogeneous population of women since program success for Choose to Move may have been due to the characteristics of the participants (Caucasian, well-educated, potentially more health conscious).

References

Koffman, D.M., Bazzarre, T., Mosca, L., Redberg, R., Schmid, T. & Wattigney, W.A. (2001). An evaluation of Choose to Move 1999: An American Heart Association physical activity program for women. *Archives of Internal Medicine*, 161, 2193-2199.

Diet and Exercise in the Treatment of Obesity: Effects of 3 Interventions on Insulin Resistance

Date of Intervention: N/A

Originally Reviewed: April 2005
Last Updated: July 2007

Promising Practice

Source

Department of Medicine, SUNY Health Science Center and Veterans Affairs Medical Center (Syracuse, New York), and the Department of Psychiatry, University of Pennsylvania School of Medicine (Pittsburgh, Pennsylvania)

Overview

This study recruited obese women from the first cohort of a larger study of diet and exercise. Subjects were approximately 43 years old with an average BMI of 36 kg/m². The original cohort was predominately Caucasian, however no information was given for the subjects in this study.

Forty-five obese women were randomly assigned to one of three treatment groups (diet along, diet and aerobic training, or diet and strength training). All subjects also received a 48-week group behaviour modification program.

Oral glucose tolerance tests were performed at baseline and at 4 points during the 96-week follow-up.

Subjects across the three treatment groups achieved a mean weight loss of 13.8 kg by week 16, which was associated with decreased insulin levels. There were no significant differences among groups in changes in BMI, weight, glucose tolerance, or insulin levels. No additional benefit of aerobic or strength exercise on insulin resistance was demonstrated. The subjects who were studied at the final follow-up maintained a weight loss of approximately 10% of initial weight. Insulin levels had returned to pre-treatment levels.

Results/Outcomes

The Research Goals were:

- To determine the effects of three different treatment conditions (diet alone, diet and aerobic exercise, and diet and strength training) on weight and insulin sensitivity.
- To determine whether family history of diabetes, hypertension, coronary artery disease, or obesity has an association with insulin levels.

The Intervention Goals were:

- To facilitate weight loss, increase glucose tolerance and decrease insulin levels in obese women.
- To reduce dietary intake to 925kcal/d consisting mostly of liquid meal replacements for the first 18 weeks, then gradually increase both caloric intake and consumption of conventional foods until week 22
- To consume a self-selected diet of approximately 1500 kcal/d with 12-15% of energy from protein, 55-60% from carbohydrate, and 25-30% from fat after week 22
- To exercise three times per week for the first 28 weeks and two times per week until week 48 (supervised), and unsupervised until week 96

The Intervention Objectives were:

- To attend weekly 90-minute group treatment sessions for the first 28 weeks
- To attend 10 biweekly group sessions from weeks 29-48
- To attend group sessions with a registered dietitian from weeks 17-26 to discuss the re-addition of foods to the study diet plan
- To attend an individual session with a dietitian to learn about meal planning

Pilot study results showed that no significant differences were found on a number of outcome variables. This was likely due to the number of limitations in the design of the interventions. The process evaluation measured attendance at exercise sessions. During the initial 24 weeks of the study, subjects in the diet and aerobic exercise group attended a mean of 75% of possible sessions. The diet and strength training group showed similar attendance rates (74%).

Outcome evaluation results included:

- Mean weight loss of 13.8 kg by week 16 in all treatment groups, leading to decreased insulin levels
- No significant differences among groups in changes in BMI, weight, glucose tolerance, or insulin levels
- No additional benefit of aerobic or strength exercise on insulin resistance
- Subjects studied at final follow-up maintained weight loss of approximately 10% of initial weight, but insulin levels had returned to pre-treatment levels.

Additional research needs to be conducted to determine whether a greater amount of weight loss (more than 10%) needs to be maintained or whether a defined BMI threshold must be achieved to preserve improvements in insulin sensitivity.

Prevention of Chronic Disease and Conditions

- Type 2 Disease
- Overweight/Obesity

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition

Setting

- Hospital-based

Audiences

- Adults Female (19-64 years)

Approach

- Education
-

Program Description

All subjects in the three treatment groups were prescribed the same diet and received 90-minute behaviour therapy sessions led by clinical psychologists. Initially, the diet was very low calorie and consisted mainly of a liquid meal replacement. Conventional foods were gradually re-introduced.

Subjects in the two exercise conditions were provided with 3 on-site, supervised training sessions per week for the first 28 weeks, 2 workouts per week from weeks 29-48, and were unsupervised thereafter.

Subjects in the diet and aerobic training groups participate in step aerobics. Subjects were assisted in developing a personal program of aerobic exercise once the supervised sessions ended.

Subjects in the diet and strength training group engaged in a circuit of resistance exercises targeting the large muscle groups. They too received help in developing a personal program of resistance training once the supervised sessions ended.

Resources

None mentioned.

Other Information

Community organizations (e.g. the YMCA) and community resources (e.g. walking trails, bicycle paths) need to be available for the supervised group exercise activities. Access to a health professional who could assist with meal planning would also be important.

Subjects were provided with all meals for the first 22 weeks of the study, which would have been extremely costly.

Clinical psychologists and a registered dietitian led behaviour therapy sessions. No information was given regarding expertise of staff who supervised exercise sessions. However, in the study from which this cohort was drawn, graduate students in exercise physiology supervised these sessions.

References

Wadden, T.A., Vogt, R.A., Andersen, R.E., Bartlett, S.J. & Foster, G.D. (1997). Exercise in the treatment of obesity: Effects of four interventions on body composition, resting energy expenditure, appetite and mood. *Journal of Consulting and Clinical Psychology, 65*(2), 269-277.

Weinstock, R.S., Huijiang, D. & Wadden, T. A. (1998). Diet and exercise in the treatment of obesity: Effects of 3 interventions on insulin resistance. *Archives of Internal Medicine*, 158, 2477-2483.

Primary Prevention of Weight Gain



Date of Intervention: N/A

Originally Reviewed: April 2005

Last Updated: July 2007

Promising Practice

Source

Department of Psychiatry, University of Pittsburgh School of Medicine (Pittsburgh, Pennsylvania)

Overview

This is a primary prevention program of weight gain for women aged 25-34. A total of 102 normal-weight women were randomized to one of three treatment formats (group meetings, correspondence course, no-treatment control). The main outcome was acceptability of treatment formats, which was evaluated by determining the proportion of women participating in their assigned format. Results showed that significantly fewer women chose to participate in a group format, compared to the correspondence course and no-treatment control. However, the group format produced the largest short-term changes in weight.

The program targeted normal-weight women aged 25-34. The group had a BMI between 21 and 25 kg/m², were primarily Caucasian and college-educated.

Results/Outcomes

There were two sets of goals for this project: research and intervention. The two research goals were:

- To evaluate the acceptability of each of three treatment formats (group meetings, correspondence course, no-treatment control) for prevention of weight gain in young adult females.
- To collect preliminary data on the efficacy of the three treatment formats.

The Intervention goals were:

- To achieve a modest weight loss that would result in subjects being in the lower end of their healthy weight range
- To remain in a healthy weight range in the future
- To reduce fat intake to no more than 30% of total energy intake
- Achieve a daily goal for energy intake based on baseline weight
- For sedentary subjects: to gradually increase their physical activity level over the course of treatment so that by the end of the study period, they are expending 4186 kJ (1000 kcal) per week
- For active subjects: to make stepwise increases in activity levels until they achieve an average weekly expenditure of 6280 kJ (1500 kcal)

The Project Objectives were:

- To learn skills such as self-monitoring, stimulus control, and problem-solving
- For subjects in the group meeting format: to attend weekly group meetings over a 10-week period
- For subjects in the correspondence format: to complete brief homework assignments based on weekly mailed lessons over a 10-week period
- For subjects in the no-treatment (brochure) format: to read a lifestyle brochure and to make the behaviour changes recommended in it

Impact and outcome evaluation were conducted. The impact evaluation showed that at post-treatment, subjects in the group meeting format had lost significantly more weight than subjects in the brochure condition. The correspondence groups' mean weight loss fell midway between the means of the two groups. At the 6-month follow-up point, average weight losses of the three conditions were not significantly different from each other.

The only reported result of the outcome evaluation was that significantly fewer women chose to participate in a group format, compared to the correspondence course and no-treatment control.

Other findings of the study indicated that the correspondence course format had greater public health impact than the group meeting format. It appealed to a greater percentage of the women to whom it was offered.

The study findings may have limited generalizability since subjects were primarily well-educated Caucasian women with body weights well within the normal-weight range.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Overweight/Obesity

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition
-

Setting

- Community at Large
- In home
- Media

Audiences

- Adults Female (19-64 years)

Approach

- Education

Program Description

The project began with an orientation meeting to discuss the importance of achieving a healthy weight through healthy eating and active living. Participants were randomized to one of three treatment formats: group meetings, correspondence course, or no-treatment (brochure) format.

In the group meeting format, subjects were asked to participate in weekly group meetings over a 10-week period. In the correspondence course, subjects received 10 mailed lessons over a 10-week period and were asked to return brief homework assignments for each lesson. The content material for both formats educated participants about how to use behavioural weight control strategies to achieve weight control. These included self-monitoring, goal setting, stimulus control and problem solving.

Those in the no-treatment format were given a lifestyle brochure (“On Your Way to Fitness”, by the C. Everett Koop Foundation) and asked to make the lifestyle changes recommended in it.

Resources

Course materials were developed for the correspondence course and the group sessions.

Other Information

The reasons for the differences in acceptability rates for the three treatment formats are unclear. Because of this, future studies should assess the specific factors (e.g. behavioural, life events), which predict treatment acceptability and include additional measure of acceptability (e.g. subject ratings of program difficulty).

References

Klem, M.L., Viteri, J.E. & Wing, R.R. (2000). Primary prevention of weight gain for women aged 25-34: the acceptability of treatment formats. *International Journal of Obesity*, 24, 219-225.

Source

University of Toronto and health care providers in Sioux Lookout, Ontario.

Overview

This program began in 1990 at the Sioux Lookout Zone Hospital. It evolved and grew in terms of staff and programs into a community-driven and local effort to prevent and manage non-insulin dependent diabetes mellitus (NIDDM) in the Aboriginal population.

The program involves diabetes education and health care services based on the goals of diabetes prevention and diabetes management. The initiatives include traveling foot-care and diabetes education programs, community health representative training programs, a youth camp, school programs, grocery store labeling programs and culturally relevant education manuals and materials.

That target group for the program was individuals of all ages living in the community of Sioux Lookout, Ontario. More specific target audiences for some activities included women in the community diagnosed with gestational diabetes and youth under the age of 18 diagnosed with NIDDM.

Results/Outcomes

The goal of the program was to provide personally and culturally relevant diabetes education programs to clients, families, communities and caregivers, and to do so at a local level.

The objective was to describe components of a program designed to prevent and manage NIDDM in a northwestern Ontario Aboriginal community.

The goal of the management section of the NIDDM program was to maximize daily quality of life through empowering clients, their families and communities. The goal of the prevention component of the program was to have activities aimed at the primary prevention of diabetes. One type of evaluation (process) was reported on and another was underway (impact).

Process Evaluation

The program has had significant impacts on attitudes, knowledge, behaviours, and health outcomes. This has been determined through focus groups, client questionnaires, self-reports of behaviour change and laboratory results. The youth camp has allowed youths with diabetes to meet each other and discuss issues of concern to them. Not further details are available.

The Sioux Lookout Diabetes Program has resulted in the community assuming a greater responsibility for local administration of prevention and management programs for NIDDM. It began as a hospital-based intervention and has evolved and grown into a large community-wide endeavour.

Prevention of Chronic Disease and Conditions

- Type 2 Diabetes

Risk Factors and Other Issues

- Alcohol and Other Drugs
- Physical Inactivity
- Unhealthy Eating/ Nutrition
- Stress

Setting

- Day Camp
- Elementary Schools
- Secondary Schools
- Community at Large
- Grocery Stores
- Hospital-based
- Media

Audiences

- Youth (13 – 18 years)
- Adults Female (19-64 years)
- General Community (incl. children, youth, adults and seniors)

Audiences Characteristics

- Aboriginal

Approach

- Awareness
- Education
- Environmental Support

Program Description

The SLDP began with funding for two diabetes educators. It has moved from the hospital into the community and is now managed primarily by the community. The two main components are: Diabetes Management and Diabetes Prevention. Diabetes Management includes the following elements:

- Diabetes education supported by regular follow-up
- Family members were encouraged to attend the education sessions
- Home visits
- Foot-care services and the training of clients in their own foot care
- A grocery store tour program with a food-labelling component in cooperation with the Northwest Company and Versa Foods. The goal was to assist clients in selecting healthy choices
- Store-level taste-tests
- Distribution of the “Northern Ontario Budget Wise Food Guide”
- Education for women with gestational diabetes and screening for diabetes following delivery
- A summer camp offered for youth with Type 2 diabetes under the age of 18 living in the Sioux Lookout Zone
 - The camp has an informal learning environment and the goal is to reinforce the impact healthy living has on blood glucose control
 - Discussions take place with a facilitator and youth around a campfire
 - Some common issues discussed include alcohol and the stress of relationships
- Efforts directed towards identifying people in the region with undiagnosed diabetes

The Diabetes Prevention component includes:

- Translated call-in radio shows which are related to a topic relevant to the community such as physical activity or stress management
- Development of catchy radio jingles
- Translated and highly visual newspaper ads on diabetes related topics
- Open houses for the communities at large
- Support groups (e.g. the Cook to Live and be Active for Life community kitchen group – which walks or plays dodge-ball as the food is cooking)
- Participation in a community-wide action group whose goal is to make Sioux Lookout an active living community
- School-based programs e.g. informative learning sessions and “Diabetes Jeopardy”

Resources

The “Diabetes Jeopardy” game was developed by the program and is used in schools. It reviews diabetes information and encourages students to take risks in a supportive environment. A translated taped radio show is available to explain diabetes basics and the grocery store program. A “Northern Ontario Budget Wise Food Guide” was also developed and illustrates how some nutritious and desirable choices can be cheaper than less nutritious but perceived cheaper foods.

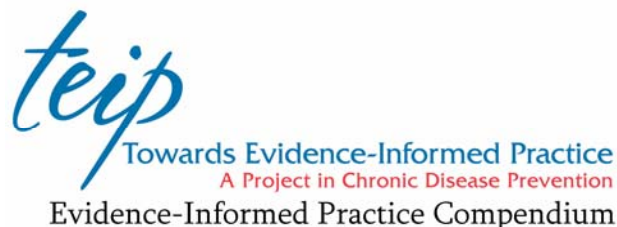
Other Information

A vision for the future would include further development and coordination of the network of local diabetes workers in order to address more fully and support prevention and management needs on an ongoing basis.

References

Morrison, N., & Dooley, J. (1998). The Sioux Lookout Diabetes Program: Diabetes prevention and management in Northwestern Ontario. *International Journal of Circumpolar Health*, 57, Suppl 1, 364-369.

Strömstad Primary Health Care Intervention for Women



Date of Intervention: N/A

Originally Reviewed: April 2005

Last Updated: July 2007

Promising Practice

Source

Goteborg University, Goteborg, Sweden

Overview

The primary aim of this follow-up study was to assess the long-term effect of the intervention of cardiovascular disease (CVD) risk-factor control by a comparison of participant and non-participant groups. A second aim was to find out if the intervention program had any influence on the group of women with risk factors as a whole.

The target group for the intervention women aged 45-64 years with CVD risk factors. The women lived in a town of about 10,000 residents that had been exposed to a CVD prevention program during 1985-87 because of increasing mortality rates for CVD and in particular, strokes. The intervention consisted of course in lifestyle modification with a multifactorial approach. The 8-year follow-up results in middle-aged women were a reduction in body weight and blood pressure compared to a Comparison cohort community.

The intervention ran for 8 years in a community setting.

Results/Outcomes

The primary aim of this follow-up study was to assess the long-term effect of the intervention on CVD risk-factor control by a comparison of participant and non-participant groups. A second aim was to find out if the intervention program had any influence on the group of women with risk factors as a whole.

There are two sets of results to describe:

- 1) results that compared the Intervention Participant cohort with the Intervention Non Participant cohort
- 2) results that compared the Intervention and Non-Intervention cohorts.

The results for the first group were:

Systolic blood pressure (SBP) significantly decreased in the Intervention Participant group (1.6 mm Hg) and there was no difference for prevalence of medication for hypertension between the two groups

Anthropometric measurements, serum lipids and frequency of exercise did not differ between the 2 groups, however, body weight did not increase in the Intervention Participant group compared with a mean increase of 1.4 kg in the non-participant group Self-reported attitudes toward health eating were better in the Intervention Participant cohort

For the second group, the following was reported:

During the 8 years, weight and SBP rose significantly more among women in the NonIntervention cohort than the Intervention cohort: body weight change of 0.12 kg in the Intervention cohort versus .26 kg in the Non-Intervention cohort; BP change +0.27/(-0/14) mm Hg in the Intervention cohort versus 1.64/0/93 mm Hg in the Non-Intervention cohort.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Hypertension

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition

Setting

- Grocery Stores
- Media
- Restaurants

Audiences

- Adults Female (19-64 years)

-

Approach

- Education

Program Description

A total of 927 women (86%) in the community between the ages of 45-64 years underwent screening. Of these, 383 (40%) had one or more risk factors for cardiovascular disease (CVD) and 30% of them (114) volunteered to participate in the intervention. The remaining 269 women were regarded as non-participants. A total of 80 participants and 186 non-participants completed the follow-up evaluation.

Each cohort had different interventions:

All Intervention groups received a community-based lifestyle information programs that was disseminated to the public via restaurants, food stores and the local newspaper. The Intervention Non-Participant cohort received no other individualized lifestyle education intervention. The Intervention Participant cohort met once a week in small groups for 3 months. They focused on obtaining education and getting hands-on experience and social networking. After the 3 months, groups met once or twice yearly for 8 years to discuss new developments in diet, exercise and health. The Non-Intervention cohort was a comparison group of other high-risk, middle -aged women in Gothenburg, Sweden.

This program took place in a community setting.

Resources

No specific resources were described.

Other Information

A community prevention program designed for women with CVD risk factors can produce long standing effects on CVD risk-factor patterns. Women who participated in the 3 -month course in healthy lifestyle showed significant reductions in Systolic Blood Pressure over 8 years compared to non-participants. It must be noted that during the same intervention period, health information was disseminated to the entire small community, which may have improved the

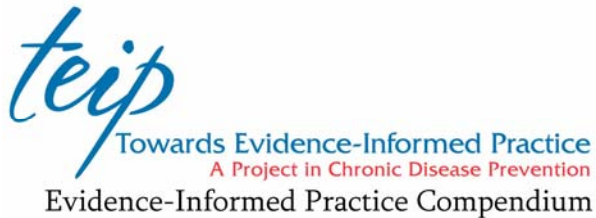
risk factors for those not participating in the lifestyle intervention courses. When making comparisons to another cohort community, additional differences emerged. Over the 8 years of the study, weight gain and Blood Pressure (BP) were significantly higher in the comparison cohort. Given the high level of stroke in women within the community, the BP advantage in the Intervention cohort is encouraging. No differences in cardiovascular events were reported between cohorts, and the convenience sample may not have been sufficiently large enough to detect differences. The cohort design limits the strength of evidence. The results are relevant only to the middle-aged female high-risk population studied.

The promise of the study comes from the long-term benefits of an approach that may have high practicality: a targeted education intervention for women with risk factors and information dissemination on a community level. The entire community program may be more costeffective than individual intervention.

References

No references available

Well-Integrated Screening and Evaluation for Women in Massachusetts, Arizona and North Carolina (WISEWOMAN)



Date of Intervention: N/A

Originally Reviewed: April 2005

Last Updated: July 2007

Promising Practice

Source

Overview

The Well-Integrated Screening and Evaluation for Women in Massachusetts, Arizona and North Carolina (WISEWOMAN) Projects tested the feasibility and effectiveness of adding cardiovascular disease prevention to a nationwide breast and cervical cancer screening program. Women agreeing to participate at each selected site were assessed for level of CVD risk factors. Sites were assigned to minimum intervention (MI) or enhanced intervention (EI). Minimum intervention consisted mainly of brief counselling and referral. Enhanced interventions were tailored to each population, and consisted of skill-building and facilitating activities designed to improve nutrition and physical activity. Results are not available for Arizona, however results for Massachusetts and North Carolina show that blood pressure, total cholesterol, and HDL cholesterol profiles of both the EI and MI groups improved, body weight was maintained, and smoking declined. Although the 10-year estimated CHD death rate declined more in the EI group, the difference between groups was not statistically significant. The target audience was women under 50 years of age who were financially disadvantaged or who were uninsured or underinsured.

Results/Outcomes

There were two types of goals for this project: research and intervention. The research goal was:

- To determine whether a low-intensity minimum intervention or a higher-intensity enhanced intervention, when added to an existing cancer screening program for financially disadvantaged women, will improve cardiovascular disease risk factors and coronary heart disease death rate

The Intervention goals were:

- To improve CVD risk factors through increased physical activity and adequate nutrition
- To lower dietary fat and cholesterol intake
- To increase physical activity to at least 30 minutes of moderate to vigorous exercise on most days of the week

Objectives for the program were:

Minimum Intervention (MI) Objectives:

- To follow up with high-risk participants through the health department's usual counselling systems, educational materials, and referral to a physician

Enhanced Intervention (EI) Objectives for each site were:

North Carolina:

- To attend 3 individual counselling sessions with a public health nurse, health educator, or nutritionist
- To select, with the help of health department staff, two or three behaviour change strategies to work on between each counselling session

Massachusetts:

- To attend two New Leaf counselling sessions
- To attend group interventions including physical activity programs (e.g., mall-based and outdoor walking programs), and cultural festivals incorporating physical activity, nutrition, and stress management

Arizona:

- To work with promotoras to integrate physical activity into their lives

The "New Leaf" intervention program used in WISEWOMAN was based on a previous intervention entitled "Food for Heart".

Results for both process and outcome evaluation were reported. The purpose of the process evaluation was to gather information on aspects of the program operation, including information regarding clinic flow, staff and client acceptance, as well as the financial costs of screening and intervention. In Massachusetts, 77% of women in the Enhanced Intervention (EI) received New Leaf counseling and 48% participated in classes and cultural festivals. In North Carolina, 85% of participants attended at least 1 of 3 Enhanced Intervention counseling session, while 60% attend all three sessions. Data from Arizona were not available.

Outcome Evaluation

The results from North Carolina and Massachusetts were combined and revealed that:

- Blood pressure, total cholesterol, and high-density lipoprotein cholesterol profiles improved in both groups
- Body weight was maintained
- Smoking declined
- The 10-year estimated coronary heart disease death rate (per 1000 women) declined by (ip)3.5 deaths for the EI group, and .7 for the MI group
- Reductions in clinical outcomes were modest and not significant

Some reasons for the absence of an Intervention effect include:

- Inadequate implementation of the intervention due in part to difficulties with staff training and the complexity of the physical activity assessment (PAA) tool
- Insufficient strength of the intervention
- Higher than expected impact of usual care in the minimal intervention groups

To improve the intervention for future use, the workgroup has simplified the PAA, streamlined the intervention process and increased its flexibility, and added assessment and counseling components designed for individuals with physical impairments. They stress that further work is needed to refine interventions applicable to this high-risk population of financially disadvantaged women with little or no health insurance.

Results from Arizona were not available.

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Stroke
- Hypertension

Risk Factors and Other Issues

- Physical Inactivity
- Tobacco Use
- Unhealthy Eating/ Nutrition

Setting

- Community at Large
- Hospital-based

Audiences

- Adults Female (19-64 years)

Audiences Characteristics

- Community Volunteer
- Individuals Living in Low Income Situation

Approach

- Awareness
- Education

Program Description

In each state, the intervention was implemented slightly differently:

- North Carolina used public health nurses, health educators and nutritionists
- Arizona trained Hispanic women as lay health advisors, or promotoras
- Massachusetts relied on paid and volunteer staff

Each site implemented Minimal and Enhanced Interventions (MI and EI). Minimum interventions consisted of baseline screening for CVD risk factors, minimal on-site counseling, education, referral and follow-up using established protocols. Enhanced Interventions involved specially designed education and intervention programming tailored to the particular population served.

The counseling tool (New Leaf...Choices for Health Living) was used by North Carolina and Massachusetts. It was a structured diet and physical activity assessment and intervention program to guide counseling by clinic staff who were not specialists. It was designed to help counselors and patients deal with obstacles to lifestyle modification, such as complexity, cost, lack of time, cultural irrelevance and lack of practical implementation strategies. The physical activity component of "New Leaf" encouraged a daily accumulation of moderate activity rather than less frequent, more vigorous activity.

Resources

The main resource developed for the program was "New Leaf...Choices for Healthy Living". It was a structured counseling and assessment tool that was adapted from the "Food for Heart" program. The materials are contained in a single loose-leaf notebook from which assessment and monitoring pages can be removed for filing at the health department.

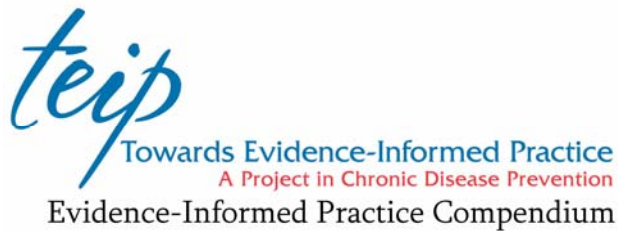
Other Information

This program model (supplementing an existing program for low-income women) was shown to be feasible and may be an effective means for promoting healthy dietary practices.

References

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- Will, J.C. et al. (2001). Reducing risk for cardiovascular disease in uninsured women: Combined results from two WISEWOMAN Projects. *Journal of American Medical Women's Association, 56*, 161-165.

Women's Healthy Lifestyle Project



Date of Intervention: N/A

Originally Reviewed: April 2005

Last Updated: July 2007

Promising Practice

Source

University of Pittsburgh (Pittsburgh, Pennsylvania)

Overview

The *Women's Healthy Lifestyle Project (WHLP)* was a 5-year randomized clinical trial. 535 healthy pre-menopausal women were randomized into either an intervention group or an assessment-only group. The mean age of participants was 47 years, and most of the women were white and had at least some college education. The participants in the intervention group were asked to lower their intake of total fat, saturated fat, and total cholesterol to achieve a modest weight loss, and to increase physical activity levels. The intervention included an intensive group program during the first 6 months and follow-up individual/group sessions from 6 through 54 months. Results show that the intervention group had a significantly lower increase in LDL, triglycerides, and glucose, significantly greater weight loss, and a significantly greater decrease in waist circumference than did the assessment-only group. The target audience was healthy women between the ages of 44-50 who had experienced less than 3 months amenorrhea in the six months prior to the study. The sample was predominantly Caucasian, married, and highly educated, working women. The mean BMI was 25 kg/m², and only 9% of the sample was smokers.

Results/Outcomes

There were two sets of goals for the project: research goals and Lifestyle Intervention goals.

The research goals were:

To determine whether a diet and physical activity lifestyle intervention would prevent increases in LDL cholesterol and body weight observed in women during the transition from pre- to post-menopausal states; and

To assess the relationship between hormone replacement therapy and changes in LDL cholesterol, and determine whether the intervention has an impact on subjects' blood pressure, glucose levels, HDL cholesterol, triglycerides, and apolipoproteins.

The Lifestyle Intervention goals were:

- Lower total fat intake to 25% of daily calories
- Lower saturated fat intake to 7% of daily calories
- Lower dietary cholesterol intake to 100mg/day
- Follow a 1300- or 1500-kcal meal plan for the first 4 weeks, gradually modifying the meal plan to include novel or favourite foods
- Achieve a modest weight loss of 5, 10, or 15 pounds for baseline BMI of ≤ 24 , 25-26, or ≥ 27 kg/m² respectively
- Increase moderate-intensity physical activity in a stepwise fashion to a minimum expenditure of 1000 kcal per week, up to 1500 kcal/week or more depending on baseline activity level
- Increase daily lifestyle physical activity (e.g. climbing stairs instead of using an elevator)

The objectives of the Lifestyle Intervention were:

- To attend a 15-session group program held over the first 20 weeks of the study
- To self-monitor total fat, saturated fat, and energy intakes for the first 6 months
- To attend group meetings monthly during months 6 to 8, and then bimonthly during months 9-14
- To attend refresher programs on nutrition, weight control, and physical activity during months 14 and 54

Process and outcome evaluations were conducted.

For the process evaluation, researchers measured adherence to treatment by tracking attendance at group sessions. Tracking showed that participants attended (on average) 76% of 15 sessions during the initial 20-week phase of intervention. The number of treatment sessions attended was significantly correlated with change in risk factors such as weight, total cholesterol and glucose.

Outcome results at the 54-month examination showed:

- Significantly less of an increase in LDL cholesterol in the Intervention group than in the Assessment-only group
- A slight but significant decrease in weight for the Intervention group
- Increase in weight, triglycerides and glucose for the Assessment-only group
- Significant decrease in waist circumference in the Intervention group
- No differences in HDL cholesterol or blood pressure between the groups
- Women taking hormone replacement therapy had a smaller increase in LDL cholesterol

It was noted that community supports are necessary for impact or to enhance program impact. Two that were mentioned include:

- Adequate opportunities for physical activity/recreation in the community that are easily accessible to all women
- Recruitment efforts that provide for more varied ethnic and socioeconomic backgrounds

Prevention of Chronic Disease and Conditions

- Cardiovascular Disease
- Stroke
- Type 2 Disease

Risk Factors and Other Issues

- Physical Inactivity
- Unhealthy Eating/ Nutrition

Setting

- Hospital-based

Audiences

- Adults Female (19-64 years)

Approach

- Education

Program Description

Participants in the WHLP were randomly assigned to a Lifestyle Intervention group or to an Assessment-only control group. Both groups attended follow-up clinic assessments at 6, 18, 30, 42, and 54 months after randomization.

The lifestyle intervention was implemented in two Phases:

Phase 1: The first 20 weeks included 10 weekly group meetings followed by 10 biweekly meetings. This phase consisted of participants following a reduced-calorie diet and limiting total fat, saturated fat, and cholesterol as per the aims of the study. Beginning at the third week, interventionists provided education to gradually increase participants' physical activity.

Phase 2: Following the initial 20-week intensive intervention, participants entered the maintenance phase of the program. This phase consisted of three monthly group meetings, followed by 3 bimonthly meetings. Thereafter, participants were provided group, mail, or telephone contact on average every 2 to 3 months. In addition, 6-week refresher programs were offered to all participants, as well as individual visits, group meetings, or telephone support for adherence difficulties.

Resources

None mentioned.

Other Information

This intervention is labour intensive and did not determine the efficacy of specific intervention components: prevention of weight gain through caloric reduction, low fat diet, and increased physical activity, or change in fatty acid composition of the diet.

Future research could make use of newer nutritional approaches which may further enhance the reduction of LDL cholesterol levels.

While costs were not specified, there was only an 11.6% response rate to mailings for recruitment purposes, and the numerous baseline measures would have likely been fairly expensive.

The results have somewhat questionable generalizability given the homogeneity of the group. The program could fit reasonably well with other lifestyle interventions since the dietary and the physical activity recommendations can be achieved through a variety of methods.

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