

What is a real effectiveness of the behavioral counseling to promote a healthy lifestyle?

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Short description of behavioral counseling and its effectiveness in prevention of cardiometabolic diseases.

Background

A healthy lifestyle, including a healthy diet, increased physical activity and reduced sedentary behavior, is an effective strategy for cardiovascular diseases prevention. Lack of physical activity is an important risk factor for noncommunicable diseases such as stroke, diabetes and cancer. However, according to WHO data, there is a trend towards decreasing in physical activity of the population in many countries. In a global context, 23% of adults and 81% of children and adolescents are currently not physically active [1](#).

In this regard, in many clinical guidelines can be found recommendations for patients' education in the impact of healthy lifestyle on risk for various diseases and encouraging patients to increase physical activity both in the presence of cardiovascular and metabolic risk factors and in their absence.

Behavioral counseling

Interventions aimed at changing patient's lifestyle are called «behavioral counseling». Usually, they provided in form of face-to-face contact as individual or group sessions. However, they can also be provided by phone or via the Internet as online consultations or text messages.

Behavioral counseling usually can be carried out by a wide range of specialists, including physicians and nutritionists, physical therapists, nurses, specially trained advisors on healthy lifestyles, etc.

These interventions are aimed at providing relevant information, motivation and skills to develop a healthy diet and/or physical activity patterns. The concept of a healthy diet includes:

- Restriction of caloric intake or overall size portions.
- Limited carbohydrates consumption, especially those with a high glycemic index.
- Increased consumption of complex carbohydrates (with low glycemic index) and fibers.
- Increased consumption of fruits and vegetables.
- Moderate alcohol consumption.
- Reduced consumption of foods containing saturated fatty acids.

Alone or in combination with dietary interventions within behavioral counseling for patients can be provided recommendations for physical activity. They can include individual advice or special exercises under the supervision of a specialist, using special devices for the recording of physical activities (eg, pedometer) and keeping an exercise diary.

Alternatively, patients can be offered individualized plans, conducted sessions for improving problem-solving skills, provided periodic audit and feedback.

Below is provided an example of the «Green Prescription» program, which is widely used in New Zealand among patients for lifestyle modifications. It is designed mainly for patients with heart diseases, hypertension, diabetes, depressive disorders, obesity, arthritis and certain respiratory diseases that increase cardiovascular risk. It is important to note that a patient must be in a stable condition for participation in this program.

«Green Prescription» is carried out by doctors or nurses who have passed a special 4-hour training on the motivational interviewing. After the screening according to the stage of behavioral counseling patients are given cards with tips on a healthy lifestyle. Specialist discusses with patient ways to increase physical activity and gives the green form (hence the name of the program), in which current goals and general patient data (age, weight, physical condition) are recorded. The goals may be, for example, a 30-minute walk for 3-4 times per week, increase in physical activity at home, etc. The task of the doctor/nurse is to increase patient's motivation for change. Subsequently, 1-2 times a week the patient is contacted by physical activity specialist (usually by phone) that helps to pick a specific exercise, according to how patient coped with the previous task and his physical condition [2](#).

The main goal is to increase aerobic physical activity. The patient is not considered enough physically active if he performs less than 30 minutes of moderate aerobic physical activity for 4-5 days a week. Moderate intensity aerobic physical exercise is an activity in which the patient is breathing a little faster and deeper than usual. For example, it can be a brisk walking, cycling, swimming, etc. Of course, it should correspond to the physical condition of the patient [3](#).

The effectiveness of behavioral counseling

As a part of a recent study published in the journal «JAMA», the US Preventive Services Task Force analyzed the effectiveness of behavioral counseling in the prevention of cardiovascular and metabolic diseases [4](#).

It totally included 88 randomized trials with a period of the patient's condition observation within 3-15 years.

General parameters. Overall meta-analysis showed small but statistically significant advantages of this method in maintaining blood pressure, cholesterol and body mass index. For example, among those who underwent these interventions, compared with those who did not pass, 6-12 months after the start of the program were recorded lower rates of systolic and diastolic pressure (by 1.26 and 0.75 mm Hg, respectively), low-density lipoprotein (by 2.58 mg/dL), total cholesterol (by 2.58 mg/dL) and body mass index (by 0.41 kg/m²).

Cardiovascular health and mortality. Studies with a small observation period didn't demonstrate any benefits of behavioral counseling. But in those with long follow-up period (10-15 years), this method reduced the incidence of myocardial infarction, stroke, revascularization procedures and death from cardiovascular causes by 30%.

Diet and physical activity. According to the analysis during the first 6-12 months after the behavioral counseling initiation, there was observed a significant but small increase in patients' physical activity. To be more specific, it increased physical activity by 0.20 metabolic equivalents per week. Recall that 1 metabolic equivalent consumption is equal to 3.5 ml of oxygen consumption per kilogram of body weight per minute. So the difference between the experimental and control groups was quite small.

On the other hand, when physical activity was assessed not in terms of metabolic equivalent, but in following the recommendations, the changes were more significant. Behavioral counseling increased the likelihood of adherence to physical activity guidelines by 32% compared to control.

Additionally, behavioral counseling allowed to reduce the daily amount of calories intake, in average by 5% compared to controls, to increase the consumption of fruit and vegetables per 1 serving per day and to limit daily salt intake for about 1 gram.

Possible harms. Almost all analyzed studies have demonstrated the absence of any serious side effects associated with behavioral counseling. Only in one trial revealed an increased incidence of injuries compared to controls (19% and 14%, respectively; $p = 0.03$) and falls compared to control (37% and 29%, respectively; $p < 0.001$).

References

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