

Annotated Bibliography: Nutrition Counseling on the Prevention and/or Treatment of  
Cardiovascular Disease and Stroke in Patient Care Settings

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Gaetke, L.M., Stuart, M.A., Truszczyńska H. (2006). A Single Nutrition Counseling Session with a registered dietitian improves short-term clinical outcomes for rural Kentucky patients with chronic diseases. *Journal of the American Dietetic Association*, 106, 109-112.

The authors conducting this study include a Registered Dietitian/associate professor in the Department of Nutrition and Food Science at the University of Kentucky, an analyst/programmer at the STARRS Center at the University of Kentucky and an outreach Registered Dietitian at the Appalachian Outreach Program in Lexington Kentucky. The authors compiled medical records to test their hypothesis on the effectiveness of a single nutrition counseling session from a Registered Dietitian to improve nutritional and medical status of patients with type 2 diabetes mellitus and/or cardiovascular disease. The study included 94 patients with cardiovascular disease, in which 48 received medical nutrition counseling, and 46 did not receive medical nutrition counseling. Clinical and anthropometric measures were taken at baseline, and 3 months after receiving nutrition counseling. As a result of individualized dietary instruction lasting approximately 1 hour, statistically significant improvements were noted in the nutrition counseling group compared to the group that did not receive nutrition counseling. These included decreased mean fasting glucose, HbA1c, total cholesterol, LDL level, triglyceride level, and Body Mass Index from baseline to 3 months. This article supports the effectiveness of individualized nutrition counseling for improved health outcomes in patients with cardiovascular disease, as well as other diseases (type 2 diabetes).

Hardcastle, S., Taylor, B.A., Castle, R. (2007). A randomized controlled trial on the effectiveness of a primary health care based counseling intervention on physical activity, diet and CHD risk. *Patient Education and Counseling*, 70, 31-39.

The authors of this study were funded by Eastbourne Downs Primary Care Trust to test their hypothesis on the effectiveness of counseling intervention with a Physical Activity Specialist and Registered Dietitian to result in positive changes in physical activity, diet, and health status. Patients included in the study were aged 18-65 and had at least one cardiovascular disease risk factor of Body Mass Index >28, hypertension or hypercholesterolemia. A total of 358 participants were randomized into an intervention group or a control group. The control group received standard information on exercise and nutrition, whereas the intervention group received standard information on exercise and nutrition plus 5 additional counseling sessions with a Physical Activity Specialist and Registered Dietitian over the span of 6 months. The counseling sessions integrated motivational interviewing with a stage-matched approach, which included asking open-ended questions and reflective listening. Depending on the individual's needs and readiness to change, different strategies were developed for the patient. The results of the study revealed counseling to have a statistically significant impact on health. The intervention group after 6 months increased physical activity, particularly walking, and there were decreases in blood pressure, cholesterol, and body weight. Of the participants with a >5% weight change in 6 months, 86% were in the intervention group. This article supports the use of counseling, particularly motivational interviewing, from Physical Activity Specialists and Registered Dietitians to reduce cardiovascular risk factors.

Kirk, A., MacMillan, F., Webster, N. (2010). Application of the transtheoretical model to physical activity in older adults with type 2 diabetes and/or cardiovascular disease. *Psychology of Sport and Exercise, 11*, 320-324.

The authors of the study were supported by the Department of Sport, Culture and The Arts at the University of Strathclyde in Galsgow, UK. The aim of the study was to test their hypothesis on the transtheoretical model (TTM) application on physical activity and older adult patients with type 2 diabetes and/or cardiovascular disease. The TTM has proved effective in younger and middle aged populations, but limited research has been conducted on older populations using the TTM. The stages of change from low to high ambition include: precontemplation, contemplation, preparation, action, and maintenance. The study included 85 participants with type 2 diabetes and/or cardiovascular disease, who read physical activity recommendations for health and cardiorespiratory fitness, and were then placed in one of the five stages. After 7 days, a physical activity recall questionnaire was used to assess their new stage. The results of the study show that patients in higher stages of behavior change (maintenance stage compared to contemplation stage) reported higher physical activity levels, high self-efficacy, and identification of the pros to more physical activity. Additionally, consciousness rising increased from contemplation to action, self-liberation increased from contemplation to maintenance, and helping relationships increased from preparation to maintenance. The study concludes that TTM is an effective tool to use for an older population with type 2 diabetes and/or cardiovascular disease. The study focuses on physical activity, a factor in cardiovascular disease risk, but TTM could also be applicable to assessing and changing behaviors related to other risk factors such as diet and nutrition.

Thompson, D.R., Chair, S.Y., Chan, S.W., Astin, F., Davidson, P.M., Ski, C.F. (2010).

Motivational interviewing: a useful approach to improving cardiovascular health?

*Journal of Clinical Nursing*, 20, 1236-1244.

The authors of this review are primarily professors in nursing or healthcare in various areas including Australia, Hong Kong, Singapore, UK, and New South Wales, and funded by the Health and Health Services Research Fund in Hong Kong. The goal of the review was to determine if motivational interviewing is an effective approach in regards to changing behavior to improve cardiovascular health status. The review included studies from January 1999 – December 2009 with five primary studies pertaining directly to motivational interviewing and cardiovascular health. Additionally, there were four meta-analyses, one systematic review and three literature reviews of motivational interviewing. The results of these studies reveal strong evidence that motivational interviewing by personally engaging patients in the process of health behavior change can impact and improve cardiovascular risk factors. Despite there only being five studies primarily directed at motivational interviewing and cardiovascular health, each study supported the effectiveness of motivational interviewing for behavior change. The review provides an overall concrete answer to the effectiveness nutritional counseling, especially motivational interviewing, to have a positive impact on healthy behaviors and cardiovascular health status. The review also supports previous research conducted in support of counseling and motivational interviewing towards behavior change.