



Health Dialogues

Nutrition

A Tool to Help You and Your Patients
Change Unhealthy Behaviors

Developed by
American Medical Student Association/Foundation
Reston, Virginia
for the
Health Resources and Services Administration
Bureau of Health Professions
Division of Medicine and Dentistry



Health Behavior Change

The Challenge

Almost half of the deaths in the United States are attributable to unhealthy lifestyles. If individuals were willing to change their poor health behaviors, the rates of premature death and disability would substantially decline. Health care professionals need to determine effective ways to promote health behavior changes.

The Facts

On Behavior Change

- It is a well-known fact that an individual's health status is intimately related to his/her beliefs, attitudes, and behaviors.
- Obesity, smoking, and lack of physical activity are of current public health concern due to their association with chronic diseases such as cancer, hypertension, and depression.¹ Researchers have found that behavior change is an important tool in prevention, since changes such as smoking cessation and increasing physical activity are predictors of *decreased risk*.²

On the Physician's Role

- Physicians are more likely to counsel on health behavior change to patients whose health is already compromised than to patients who engage in unhealthy behaviors but do not yet show symptoms of disease.³
- Health promotion strategies and patient adherence to recommendations are more likely to be successful if suggested and encouraged by an individual's physician.^{4,5}
- Furthermore, it has been demonstrated that physicians who themselves have healthy habits are more likely to promote such habits to patients.⁶
- Adults who receive regular care from a family physician are more likely to receive recommended preventive services such as blood pressure measurement, mammograms, and Pap smears.⁷
- A good physician-patient relationship is essential in order to affect positive health behavior changes.
- There is evidence that physician approachability (e.g. introducing oneself, exploring the patient's worries and expectations, answering all of the patient's questions, avoiding unexplained medical jargon, engaging in some nonmedical talk, and being friendly rather than businesslike) produces higher degrees of patient satisfaction and compliance.⁸

Due to the incidence and prevalence of these unhealthy behaviors, it is crucial that health practitioners as well as patients act upon these matters. Health care providers have little training in working with patients who have difficulty changing behaviors. Here are some of the barriers practicing physicians face.

Barriers to Health Behavior Discussions

It is sometimes hard to talk to patients about changing their health behaviors for many reasons. Why?

- Oftentimes, physicians feel that patient noncompliance with their recommendations interferes with their motivation to keep providing preventive services.
- Many physicians feel that patients will be turned off if confronted about their unhealthy behaviors and will switch to another doctor, or even worse, avoid seeing a physician at all if the discussion occurs.
- Practitioners have often expressed very little confidence in their ability to counsel patients on behavior change.⁹
- In contrast to a specialist counseling setting (e.g. weight control clinic), most physician-patient encounters are brief. Many physicians feel that the time they devote to patient counseling is not enough.
- Since clinicians receive clinical treatment guidelines from so many different sources, the relative effectiveness of different preventive services is unclear, making it difficult for busy clinicians to decide which interventions are most important during a brief patient visit.¹⁵

Behavior Change Models

In general, physician counseling should avoid telling patients what to do, but instead, should advise patients about the need for preventive activities without attempting to force them to take action.

If physicians are to help patients adopt and maintain preventive healthy behaviors, multiple resources must include a supportive practice organization, preventive information and services, and support from family and friends.¹⁰

The following are short descriptions of behavior change models that have been the basis of behavior change interventions:

A. Stages of Change (Transtheoretical Model)¹¹

- The *Stages of Change* model states that behavioral changes progress as the individual moves through the following stages:
 1. **Precontemplation**
Benefits of lifestyle change are not being considered
 2. **Contemplation**
Starting to consider change but not yet begun to act on this intention
 3. **Preparation**
Ready to change the behavior and ready to act

4. **Action**

Making the initial steps toward behavior change

5. **Maintenance**

Maintaining behavior change while often experiencing relapses

- This model provides a way to assess the patient's level of readiness or preparedness to change. Understanding patient readiness to change and appreciating barriers to change can improve patient satisfaction and reduce physician frustration during the change process.

B. Motivational Interviewing²

- MI is a directive, individual-centered counseling style for eliciting behavior change by helping the individual to explore and resolve ambivalence. It is usually used along within the Transtheoretical Model framework.
- **Key principles:**
 1. Expressing empathy, by use of reflective listening;
 2. Gently pointing out discrepancy between client's goals and the problem behavior by using reflective listening and objective feedback;
 3. Avoiding argumentation by assuming that the client is responsible for the decision to change;
 4. Rolling with resistance, rather than confronting or opposing it; and
 5. Supporting self-efficacy and willingness for change.

C. Health Belief Model

- The HBM posits that perceived threat of disease is the central and prime determinant of health behavior. It focuses on the health outcomes, assuming that increasing patient knowledge about the ill effects of the behavior would result in change.
- Demographic (i.e. age, gender), personality, structural, and social factors are not seen as directly causal of compliance.
- Interventions using this model focus on the following 4 factors which are predicted to increase the perceived threat of disease:
 1. Perceived susceptibility of disease
 2. Perceived seriousness of disease
 3. Cues to action
 4. Benefits of changing outweigh the costs

An Integrated Model of Patient Behavior

Successful disease prevention initiatives to achieve health behavior change require a versatile approach using a **combination** of strategies and techniques. Educational efforts tailored for each person and integrating multiple strategies (e.g. individual counseling, written materials, and supportive community resources) are more likely to be effective than those employing a single technique.¹²

If you're trying to get a patient to change a behavior such as eating too much

sugar or smoking, here are some things you DO NOT want to assume:²

- This person has to/ must change
- This person wants to change
- This patient's health is the prime motivating factor for him/her
- If he/she does not decide to change, the consultation has failed
- Patients are either motivated to change, or not
- Now is the right time to consider change
- A tough approach is always best
- I'm the expert, so he/she must follow my advice

Here are some tips to help you approach patients who have unhealthy behaviors. Remember, the key is to LISTEN.

Goals	Intervention Component	Strategies/Questions
Understand patient's concerns and circumstances	Establish rapport	Use open-ended questions; demonstrate concern for patient as a person: <ul style="list-style-type: none"> • <i>"If I could see the situation through your eyes, what would I see?"</i>
Get patient agreement to talk about topic	Raise subject	Request permission to discuss topic: <ul style="list-style-type: none"> • <i>"Would you mind spending a few minutes talking about (issue) and how you see it affecting your health?"</i>
Understand readiness to change behavior and to accept treatment/evaluation referral	Assess readiness	Use an assessment tool to assess readiness, and discuss results with patient: <ul style="list-style-type: none"> • <i>"How do you feel about (issue)?"</i> • <i>"On a scale of 1 to 10, how ready are you?"</i>
Raise patient awareness of consequences of the behavior, and share your concerns	Provide feedback	Use objective data from patient's medical evaluation if possible; then elicit reactions from patient: <ul style="list-style-type: none"> • <i>"What do you make of these results?"</i>

Goals	Intervention Component	Strategies/Questions
Assure patient that ongoing support is available	Offer further support, targeted to patient's readiness for change	<p>For patients who are not ready to change:</p> <ul style="list-style-type: none"> • <i>“Is there anything else you would like to know about (issue)?”</i> • <i>“What would it take to get you to consider thinking about change?”</i> <p>For patients who are “unsure”:</p> <ul style="list-style-type: none"> • <i>“What are the good things you like about (issue)?”</i> • <i>“What does it do for you?”</i> • <i>“What are the things you don't like about (issue)?”</i> • <i>“What concerns do you have about it?”</i> <p>For patients who are “ready”:</p> <ul style="list-style-type: none"> • <i>“Here are some options for change”</i> • <i>“What do you think would work best for you?”</i> • <i>Provide support and referral</i>

(adapted from D'Onofrio et al. 1996¹³)

The Five A's

Address Agenda

- Attend to the patient's agenda
- Explain that you would like to talk about some healthy choices for them to consider

Ask

- What does the patient know about the connection between his or her behavior and the possibility for disease?
- How does the patient feel about the behavior?
- Is the patient interested in changing the behavior?
- What are the patient's fears about change?
- Has the patient tried to change the behavior before? What did and didn't work?
- It is important to spend adequate time in this stage. Patient counseling is more effective when patients know that the physician understands their perspec-

tive. If you have limited time, spend most of it on assessment and then incorporate what you learn into a few words of advice.

Advise

- Tell the patient that you strongly advise behavior change
- Personalize reasons for change (e.g., “By quitting smoking you will help your daughter have fewer asthma attacks.”)
- Discuss the immediate and long-term benefits of change

Assist

- Provide accurate, complete information about risk and give the patient written materials to take home
- Address the patient’s feelings and provide support
- Address barriers to change
- Discuss steps toward behavior change
- Get attending physicians, residents or preceptors involved for additional support, more extensive advice and referrals

Arrange Follow-up

- Reaffirm the plan
- Schedule follow-up appointment or phone call

Also, the U.S. Preventive Service Task Force issued the following recommendations, which have been effective in changing certain health behaviors and can be applied regardless of the health behavior model used¹⁴:

Changing Health Behaviors:

1. Frame the teaching to match the patient’s perceptions.
 - It is important to assess the beliefs and concerns of the patient and to provide information based on this foundation. Remember that behavior change interventions need to be tailored to each patient’s specific needs.
2. Fully inform patients of the purposes and expected effects of interventions and when to expect these effects.
 - This will avoid discouragement when they cannot see the effects immediately. If side effects are common, tell the patient what to expect specifically, and under which circumstances the intervention should be stopped.
3. Suggest small changes rather than large ones.
 - People experience success just by achieving a small goal; this will initiate a positive change.
4. Be specific.
 - Explain the regime and rationale of the behavior change, even demonstrate it to the patient and write it down for him/her to take home.
5. It is sometimes easier to add new behaviors than to eliminate established behaviors.
 - For example, suggesting the patient begin moderate physical activity may be more effective than changing his/her current dietary patterns.

6. Link new behaviors to old behaviors.
 - For example, suggest using an exercise bike while watching television.
7. Use the power of your profession.
 - Patients see clinicians as health experts, so be sympathetic and supportive while giving a firm, definite message.
8. Get explicit commitments from the patient.
 - Asking the patient how they plan to follow the recommendations encourages them to think about how to integrate a specific behavior into their daily schedules.
9. Refer.
 - Sometimes it is not possible to counsel patients properly. Thus, refer patients to a nutritionist, community agency, or a support group to receive the appropriate intervention.



Nutrition

The Challenge

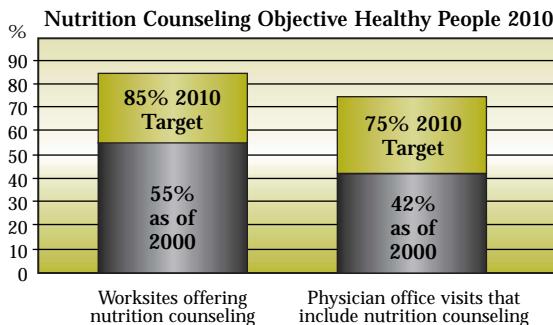
Poor nutrition and poor food choices are closely associated with 4 of the 10 leading causes of death in the US: coronary heart disease (CHD), certain types of cancer, stroke, and type 2 diabetes.¹⁵ These factors also contribute to the development of obesity. An estimated 97 million adults in the United States are overweight or obese, and the percentage of young people who are overweight has almost doubled in the past 20 years.^{16,17} These health conditions are estimated to cost society over \$200 billion each year in medical expenses and lost productivity.¹⁸

The Following Are Some of the Barriers to Providing Nutrition Counseling²⁰

1. Failure by medical care staff to identify patients with nutritional needs for either preventive or acute care.
2. Failure of medical care staff to refer patients to nutrition specialists with adequate time and resources to complete appropriate interventions.
3. Poor patient compliance.
4. Inadequate teaching materials.
5. Lack of confidence in nutrition counseling skills.
6. Lack of available resources/time.
7. Deficit of knowledge about nutrition.

Did You Know?

While 72% of patients believe that nutrition counseling is the responsibility of their doctors, less than 50% of physicians routinely ask their patients about their diet.¹⁹

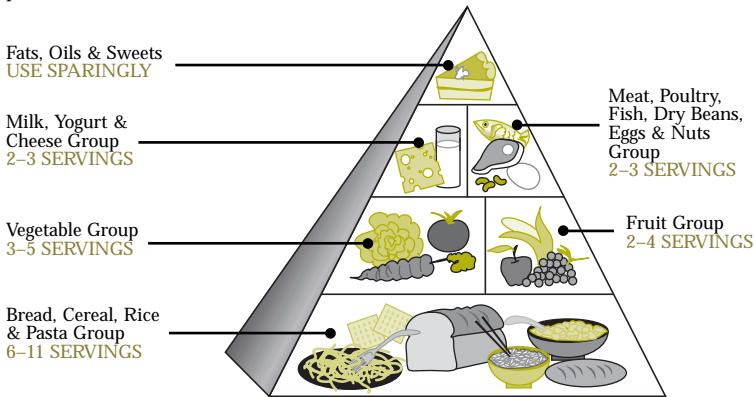


Source: National Ambulatory Medical Care Survey, CDC, NCHS; National Worksite Health Promotion Survey, Association for Worksite Health Promotion

The Solution in Progress

For these reasons, **Obesity and Overweight** has been identified as a Leading Health Indicator by the nationwide health promotion and disease prevention agenda presented in **Healthy People 2010**, which included **Nutrition Counseling** as one of its objectives for improving health.

Healthy People 2010 aims to increase the proportion of worksites that offer nutrition or weight management classes or counseling to at least 85%. The *Dietary Guidelines for Americans*²¹ recommend that, to stay healthy, individuals should choose a diet that includes a variety of grains, vegetables and fruit every day, especially whole grains; moderate salt, sodium, and sugar intake; low in fat, saturated fat, and cholesterol; and if consuming alcoholic beverages, do so moderately. It also recommends using the following food pyramid to determine food portions:



Source: U.S. Department of Agriculture/U.S. Department of Health and Human Services

What Counts As A Serving?

Bread, Cereal, Rice, and Pasta Group (Grains Group)—whole grain and refined

- 1 slice of bread
- About 1 cup of ready-to-eat cereal
- 1/2 cup of cooked cereal, rice, or pasta

Vegetable Group

- 1 cup of raw leafy vegetables
- 1/2 cup of other vegetables cooked or raw
- 3/4 cup of vegetable juice

Fruit Group

- 1 medium apple, banana, orange, pear
- 1/2 cup of chopped, cooked, or canned fruit
- 3/4 cup of fruit juice

Milk, Yogurt, and Cheese Group (Milk Group)

- 1 cup of milk or yogurt
- 1 1/2 ounces of natural cheese (such as Cheddar)
- 2 ounces of processed cheese (such as American)

Meat, Poultry, Fish, Dry Beans, Eggs, and Nuts Group (Meat and Beans Group)

- 2-3 ounces of cooked lean meat, poultry, or fish
- 1/2 cup of cooked dry beans or 1/2 cup of tofu counts as 1 ounce of lean meat
- 2 1/2-ounce soy burger or 1 egg counts as 1 ounce of lean meat
- 2 tablespoons of peanut butter or 1/3 cup of nuts counts as 1 ounce of meat

The Facts About Nutrition Counseling

Medical nutrition counseling has proven to be a clinically effective and cost-effective addition to total quality patient care.²³ Tailored printed materials distributed in primary care settings have also been effective in lowering dietary fat consumption. Nutritional therapy requires a comprehensive approach involving diet and nutrition counseling, physical activity on a regular basis, and behavioral changes. Nutritional therapy incorporates a two-step process²⁴:

1. Assessment

This step involves determination of the overall health status of the patient.

- Measure height, weight, and Body Mass Index (BMI)

The BMI of a person is calculated using the following formula²²:

$$\frac{\text{Weight (lb)} \times 703}{\text{Height}^2 (\text{in}^2)} = \text{BMI in Kg/m}^2$$

Classifications for BMI

	BMI
<i>Underweight</i>	< 18.5 kg/m ²
<i>Normal Weight</i>	18.5-24.9 kg/m ²
<i>Overweight</i>	25-29.9 kg/m ²
<i>Obesity (Class 1)</i>	30-34.9 kg/m ²
<i>Obesity (Class 2)</i>	35-39.9 kg/m ²
<i>Extreme Obesity (Class 3)</i>	≥ 40 kg/m ²

Did You Know?

Overweight and obesity substantially increase the risk of morbidity from hypertension, type 2 diabetes, coronary artery disease, stroke, gallbladder disease, osteoarthritis, sleep apnea and respiratory problems among others; these are especially evident in some minority groups, as well as in those with lower incomes and less education.²²

The BMI provides a more accurate measure of total body fat as opposed to measure of weight alone.

- Determine if patient is overweight/obese
- Ask about eating habits
This will let you know more about the patient's behaviors and will also help build rapport.
- Determine the presence of risk factors such as hypertension, diabetes, and coronary heart disease.

2. Management

This step includes therapy, counseling, and measures to control other risk factors (e.g. hypertension).

- If the person is not overweight or obese and shows no risk factors, advise on the importance of maintaining a good health status; recommend regular physical activity; and healthy eating habits.
- If the patient shows any degree of obesity, first ask if s/he wants to lose weight, and assess his/her eating habits.
- Patient involvement and investment is crucial in order for the nutrition plan to be successful.²²

Resources—Health Behavior Change

<http://health.gov/healthypeople>

The Healthy People 2010 Website, presents a comprehensive, nationwide health promotion and disease prevention agenda. It is designed to serve as a roadmap for improving the health of all people in the United States during the first decade of the 21st century.

<http://healthfinder.gov>

Web site sponsored by the Department of Health and Human Services, provides a comprehensive list of links to health related sources, including selected health information Web sites from government agencies, clearinghouses, nonprofits, and universities

<http://www.uri.edu/research/cprc>

The Cancer Prevention Research Center provides extensive information on different approaches to health behavior changes. Includes detailed description of the transtheoretical model and links to the center's staff and students, including Dr. James O. Prochaska, one of the originators of the model.

<http://pharmacy.auburn.edu/pcs/pypc0471/motivationalinterviewing/sld001.htm>

Slide presentation from the Auburn University School of Pharmacy presented by Bruce A. Berger on Motivational Interviewing. Illustrates an overview of

Did You Know?

In the U.S., more than 1/3 of the population is overweight or obese.²²

And nearly 1/2 of the women and more than 1/3 of the men report that they are attempting to lose weight.²⁵

behavior change, barriers to changing behaviors and techniques to promote health behavior changes.

http://www.csupomona.edu/~jvgrizzell/best_practices/bctheory.html

The California State University, Pomona web site. Presents an overview of various health behavior change models such as the Relapse Prevention Model, Social Support Model, Health Belief Model, and the Stages of Change Model among others.

Did You Know?

Despite the fact that scientific advances have been made in the effective use of pharmacological agents for the treatment of obesity²⁶, personalized counseling by healthcare professionals remains an essential element for prevention and treatment of overweight and obese patients.

Resources—Nutrition

<http://health.gov/healthypeople>

Healthy People 2010 presents a comprehensive, nationwide health promotion and disease prevention agenda. It is designed to serve as a roadmap for improving the health of all people in the United States during the first decade of the 21st century.

<http://aafp.org>

The American Association of Family Practice's Web site contains information for the public, as well as health professionals on different health behaviors.

http://www.nhlbi.nih.gov/guidelines/obesity/ob_home.htm

National Heart, Lung, and Blood Institute Obesity Education Initiative

<http://odphp.osophs.dhhs.gov/pubs/guidecps>

Guide to Clinical Preventive Services: Counseling to Promote a Healthy Diet.

<http://hstat.nlm.nih.gov>

National Library of Medicine's Website, Health Services/Technology Assessment Test database. Contains a wide range of resources, articles, fact sheets, etc, on various topics such as diet and nutrition.

<http://www.ring.com/health/food/food.htm>

The Food Pyramid: How to use it, and "How much is one serving?" Helps individuals determine the kinds and right amounts of food they need to consume everyday.

<http://www.niddk.nih.gov/health/nutrit/pubs/statobes.htm>

National Institute of Diabetes and Digestive and Kidney Diseases. Fact Sheets on statistics related to overweight and obesity.

http://hin.nhlbi.nih.gov/bmi_palm.htm

Downloadable BMI Calculator Implementation Tool for Palm OS

<http://hin.nhlbi.nih.gov/atp3/atp3palm.htm>

Downloadable ATP3 Cholesterol Management Implementation Tool for Palm OS

<http://hin.nhlbi.nih.gov/obgdpalm.htm>

Downloadable Obesity Education Initiative Treatment Guidelines Implementation Tool for Palm OS.

<http://www.nhlbi.nih.gov/guidelines/obesity/practgde.htm>

National Heart, Lung, and Blood Institute Obesity Education Initiative Practical Guide: Identification, Evaluation, and Treatment of Overweight and Obesity in Adults.

<http://www.health.gov/dietaryguidelines/dga2000/summary/index.htm>

Dietary Guidelines for Americans

Citations

- 1 Stork LJ, Rooney BL. Health behavior counseling at annual exams. *WMJ* 2001; 100(1): 29–32.
- 2 Emmons KM, Rollnick S. Motivational Interviewing in health care settings: Opportunities and limitations. *Am J Prev Med* 2001; 20(1): 68–74.
- 3 Kreuter MW, Scharff DP, Brennan L K, Lukwago SN. Physician recommendations for diet and physical activity: which patients get advised to change? *Prev Med* 1997; 26: 825–33.
- 4 Caggiula A, Bosch JP, Habwe. Dietary compliance patterns in the Modification of Diet in Renal Disease Study, Phase III. *J Am Soc Nephrol* 1990; 1: 288.
- 5 Yeager KK, Donehoo RS, Macera CA. Health promotion practices among physicians. *Am J Prev Med* 1996; 12(4): 238–41. (quoted)
- 6 Frank E, Kunovich-Frieze T. Physicians' prevention counseling behaviors: Current status and future directions. *Prev Med* 1995; 24: 543–5.
- 7 McIsaac WJ, Fuller-Thomson E, Talbot Y. Does having regular care by a family physician improve preventive care? *Can Fam Physician* 2001; 47: 70–6.
- 8 Ley P. Psychological studies of doctor-patient communication, in Rachman S (ed): *Contributions to Medical Psychology*. New York, Pergamon Press, 1977, vol.1, pp 9–42.
- 9 Wechsler H, Levine S, Idelson RK, Rohman M, Taylor JO. The physician's role in health promotion—a survey of primary-care practitioners. *N Engl J Med* 1983; 308: 97–100.
- 10 Kottke TE, Solberg LI, Brekke ML. Counseling—Initiation and maintenance of patient behavioral change: What is the role of the physician? *J Gen Int Med* 1990; 5(Sept-Oct Suppl): S62–S64.
- 11 Elder, JP, Ayala GX, Harris S. Theories and intervention approaches to health behavior change in primary care. *Am J Prev Med* 1999; 17(4): 275–84.
- 12 Kottke TE, Battista RN, DeFries GH, et al. Attributes of successful smoking cessation interventions in clinical practice: a meta-analysis of 42 controlled trials. *JAMA* 1988; 259: 2882–9.
- 13 D'Onofrio G, Bernstein E, Rollnick S. Motivating patients for change: a brief strategy for negotiation. In: Bernstein E, Bernstein J, eds. *Case studies in emergency medicine and the health of the public*. Boston, MA: Jones and Bartlett, 1996: Unit IV, Chapter 31.
- 14 Report of the U.S Preventive Services Task Force/ U.S. Department of Health and Human Services, Office of Public Health and Science, Office of Disease Prevention and Health Promotion. *Guide to Clinical Preventive Services*, 2nd Ed., 1996.
- 15 National Center for Health Statistics (NCHS). Report of final mortality statistics, 1995. *Monthly Vital Statistics Report* 45(11): Suppl. 2, June 12, 1997.
- 16 Kuczmarski RJ, Carrol MD, Flegal KM, Troiano RP. Varying body mass index cutoff points to describe overweight prevalence among U.S. adults: NHANES III (1988 to 1994). *Obes Res* 1997; 5: 542–8.