

Motivating People to Exercise*

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Abstract and Introduction

Abstract

Physical inactivity is a worldwide public health problem. Primary care physicians are in an excellent position to prescribe exercise and physical activity to their patients. This article discusses theories and methods of behavior change to help physicians motivate their patients to become more physically active. Calls to action for physicians are discussed.

Introduction

Physical inactivity is a worldwide public health problem. It is estimated that 6% to 10% of major noncommunicable diseases, including coronary heart disease, type 2 diabetes, and breast and colon cancers, are caused by physical inactivity.^[1] In 2008, physical inactivity caused an estimated 9% of the 57 million premature deaths, or approximately 5.3 million.^[1] In addition, research has indicated that low cardiorespiratory fitness is one of the strongest predictors of mortality.^[2–4]

Primary care physicians are in an excellent position to discuss exercise and physical activity (PA) with their patients and to prescribe PA; however, many are not counseling their patients about these topics.^[5] Physicians should talk with their patients about the strong evidence that PA can help reduce coronary heart disease, high blood pressure, stroke, metabolic syndrome, type 2 diabetes, breast and colon cancer, depression, and all-cause mortality. Additionally, physicians should base patient counseling on the research which shows that cardiorespiratory and muscular fitness can lead to improved bone health, improved cognitive function, increased functional health, and healthier body mass and composition.^[6,7]

PA plays a critical role in disease management and quality of life. PA, along with dietary interventions, can help patients with type 2 diabetes better manage their disease. PA also leads to a reduction of hepatic fat accumulation commonly associated with type 2 diabetes.^[8] PA has been shown in a meta-analysis to decrease the severity of sleep apnea, even when patients lost little or no weight. And when patients with sleep apnea increase their cardiorespiratory fitness, daytime sleepiness is reduced and sleep efficiency increases.^[9] Promising evidence also indicates that exercise can improve anxiety symptoms.^[6] When older adults participate in PA, the result is a delay in dependency and frailty and an increase in quality of life.^[10]

The current recommendations for physical activity indicate that it is important to avoid inactivity, and they note that even modest amounts of activity have health benefits. The recommendations for adults include either 150 minutes per week of moderate-intensity physical activity, 75 minutes of vigorous-intensity physical activity or some combination of the two.^[6] It is recommended that children accumulate at least 60 minutes of moderate to vigorous physical activity a day.^[6] It is not necessary to go to a fitness center many times a week or run marathons, although higher amounts of activity provide additional health benefits. An overall summary of the Physical Activity Guidelines for Americans^[6] for aerobic PA is presented in . The guidelines also recommend resistance training to improve muscular strength of major muscle groups on at least 2 days per week.

Table 1. Weekly Minutes of Moderate-Intensity Aerobic Physical Activity and Level of Health Benefit^{a,b}.

Volume of Activity	Health Benefits	Comment
Baseline	None	Being inactive is unhealthy.
Above baseline but <150 min/wk of moderate-intensity activity	Some	Low levels of activity are preferable to inactivity.
150–300 min/wk of moderate-		Activity at the high end provides more benefits than at the low

Table 2. Transtheoretical Model: Stages of Change^a.

Stage	Definition	Thought Process
Precontemplation	The person has no intention of changing the behavior in the foreseeable future and/or may not see that the behavior needs to be changed.	I won't/I can't—not even on the radar
Contemplation	The person is aware of the problem behavior and is thinking about changing the behavior.	I might
Preparation	The person is creating a plan to change the behavior.	I will/I'm starting
Action	The behavior has been modified.	I am
Maintenance	The behavior is engrained in everyday life, and the individual works to not relapse into past behavior.	I have

Table 3. Social Ecological/Physician Office Environment Changes to Promote Physical Activity (PA).

Environmental	Change Examples
Small media	<ul style="list-style-type: none"> • Provide brochures on the benefits of physical activity. • Provide brochures on ways to manage chronic disease with PA. • Provide maps for local walking trails and parks. • Display listings/flyers for local gyms and trainers and other areas for physical activity.
Closed-circuit media	<ul style="list-style-type: none"> • Televisions in the waiting rooms can play messages about PA and PA benefits. • Provide messages about managing chronic disease with PA.
A standing reception area	<p>or</p> <ul style="list-style-type: none"> • Encourage staff to reduce sedentary time by using standing desks. • Go one step further and purchase a treadmill desk for the reception area.
"Heart healthy" parking areas, attractive and easy-to-access stairwells	<ul style="list-style-type: none"> • Place "Heart Healthy Parking" signs at the parking spaces that are farthest from the building entrance. • Place messages near elevators encouraging people to take the stairs. • Make stairways attractive and inviting.



Figure 1.

"Heart Healthy Parking" sign.

Other behavior change theory models do exist and can be effective for patients. What is important is to find the method that works best in the physician's practice with the physician's patients. Supporting behavior change with a theory-driven model and tested cognitive and behavioral strategies and methods will increase the odds of beneficial outcomes for patients.

How Will This be Delivered?

When working with patients and advocating behavior change, practitioners should recognize that many times this will be a "two steps forward, one step back" type of process. Behavioral change is difficult and complex, and many factors influence it. When working to motivate patients to exercise, practitioners must first establish where the patient is with his or her own ideas about exercise. Does the patient know exercise is important but cannot seem to find the time to do it? Or is he or she not even aware of how beneficial exercise can be? The simple technique of motivational interviewing (MI) can be used to discover the patient's current stage of change as well as motivate him or her to make

changes. MI is considered a collaborative conversation between practitioner and patient, designed to elicit change and overcome apathy toward change.^[23,24]

When working with patients toward behavior change, physicians and other health professionals should focus on several areas. Help patients solve problems: Why can't they exercise? Is it a lack of time, lack of fun, or lack of support? Suggest ways to overcome these barriers. Recommend that the patient set a goal, and show him or her how to monitor progress. Encourage the patient to find a reasonable reward for achieving the goal: for example, a massage after a month of regular exercise, a trip to the zoo with a friend, a new pair of exercise shoes. Help the patient establish a social support system. This involves identifying, asking for, and using social support: For example, the patient could ask to join a neighbor during her morning walk. Social support has been shown to be one of the most important factors in maintaining a regular PA program, for everyone from children to older adults.^[25–30]

Working with patients is essential, as is referring them to other professionals for further and more in-depth counseling for behavior change. Behavior change counseling takes time that the busy physician may not have on a daily basis. Build a referral base of practitioners who specialize in PA interventions and behavior change, such as exercise specialists and counselors. Refer patients to a professional within their budget: Don't send a Medicaid patient to an expensive fitness center.

Physicians can use new technologies to improve and enhance behavioral modifications. Many physician offices already use phone calls, e-mails, and text messages for appointment reminders; this technology can also help patients stay on track with their PA goals and help them to remain motivated. Text messaging with appointment reminders, feedback, and monitoring has been shown to improve compliance with health behaviors and can help improve patients' health.^[31] In a randomized controlled trial for weight loss that included the use of text messages, those who received text messages as part of the intervention lost an average of 2.88 kg more than the control group, and 92% of the intervention group in this study would recommend the intervention to a friend.^[32] Along with text messaging, apps for smart phones can help improve patients' health. Cowan et al^[33] reported in 2013 there were 127 iPhone apps in the "health and fitness" category. Many of the apps used theoretical approaches and could be used to support behavior change.^[33] Schoffman et al^[34] reported similar findings for pediatric apps for weight loss; many of these apps also used theoretical approaches and could help support behavior change.^[34] For those who prefer a simpler approach to PA, physicians can recommend or give to patients a pedometer or accelerometer. Research has shown that simply using pedometers helps people increase their physical activity by 2491 steps per day.^[35] Pedometers and/or accelerometers can help patients set goals and monitor progress.

Physicians must help patients find a way to be accountable for efforts to improve their health. Helping patients set reasonable goals and establish a system for recording and reporting goal progress can help them to maintain progress. Using technology to track and monitor daily, weekly, and monthly progress will allow patients to see their health improvements.

Calls to Action

Although adding PA interventions or other disease prevention approaches to a busy medical practice seems daunting, physicians and their staffs can make some changes fairly easily that will make a significant difference for patients. These include using exercise as a vital sign, recommending exercise as well as drugs, using technology to support behavior change, and changing the environment.

It is time to start using exercise as a vital sign. Train staff who take vital signs to ask patients about their current level of PA and calculate each patient's amount (minutes per week) of moderate physical activity. Use this number to assess each patient's compliance with the Physical Activity Guidelines for Americans and provide appropriate counseling. Adding this information to a patient's electronic medical record will increase tracking and follow-up.^[36] Widespread adoption of exercise as a vital sign could go a long way to improving the population's health.^[36–40]

It is time to start recommending exercise in the same way that drugs or other therapies are recommended. Evidence supports the role of physicians in promoting PA to patients and indicates that patients can significantly increase PA levels when directed to by their primary care physicians.^[41,42] According to a recent report, evidence indicates that exercise is equal to drug therapies in prevention of coronary heart disease, treatment of diabetes, poststroke rehabilitation, and treatment of heart failure.^[42] When considering the potential negative side effects of drugs versus the positive side effects of PA, exercise clearly is the better choice for many patients. Research shows that when

physicians included behavior change strategies and provided written materials, patients did increase their physical activity.^[43]

It is time to start using technology to support health. Technology continues to change rapidly, so find the type of technology that fits each patient and his or her intended behavior change. The simpler the technology is to use and the easier to track progress, the more effective it will be.

It is time to start changing the environment. presents ways to ecologically incorporate PA into the medical practice. Changing the environment can have lasting effects on the population in the practice, not only the patients but also the staff. A healthy work environment can lead to a happier and healthier workforce.

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Conclusion

Physical activity is essential for a healthy life, and even small bouts of exercise can increase longevity and quality of life. Medical professionals must change the ways they counsel patients about exercise; exercise and physical activity are medicine and should be used as such.

Behavior change can be difficult and complex, but if it is approached in a theoretical way, with tested cognitive and behavioral strategies, patients can change their behaviors and improve their health. Patients should not seek perfection

but rather should aim for some level of improvement. The medical community needs to adopt a disease prevention model,^[38] and implementing PA interventions with patients is a prime way to accomplish this task.^[39]

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