

How to Prescribe Exercise for Your Patients

This Rx is better than medications.

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This article is provided exclusively to Podiatry Management by the American Academy of Podiatric Sports Medicine. The AAPSM serves to advance the understanding, prevention and management of lower extremity sports and fitness injuries. The Academy believes that providing such knowledge to the profession and the public will optimize enjoyment and safe participation in sports and fitness activities. The Academy accomplishes this mission through professional education, scientific research, public awareness and membership support. For additional information on becoming a member of the AAPSM please visit www.aapsm.org.



- 4) Motivating patients and being a role model
- 5) Understanding the effects of exercise on aging
- 6) Taking a role in preventing childhood obesity
- 7) Focusing on nutritional guidelines/weight control and maintenance

Exercise Is Medicine Initiative (ACSM)

The Exercise is Medicine Initiative is an ongoing effort to educate and encourage all physicians to assess and review every patient's physical activity program at every visit. Physicians can positively impact their patients and reduce healthcare costs. Selected chronic diseases are precipitated

We need to promote, remind, and review how we, as podiatric physicians and surgeons, can impact our patients in a positive way to move more. Unfortunately, sometimes exercise and training can have a negative connotation to some of our less active minded (non-athletic) patients, and we may do better to encourage movement vs. exercise in our quest for promoting fitness for our patients.

It is important to have medical clearance before starting any exercise program, and depending on the health of the patient, the exercise program can be individualized and tailored to their needs. Many medication dosages can be reduced or

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even discontinued with a healthier lifestyle. The following goals and objectives of this article will touch upon several areas:

- 1) Understanding the Exercise is Medicine initiative for health care professionals (ACSM)
- 2) Appreciating the benefits of exercising: social, physical, and psychological
- 3) Prescribing and adapting exercise to patients on a regular basis

ed by physical inactivity.

The Initiative was developed to raise public awareness of the role of exercise in health, emphasize the importance to physicians of exercise prescription in the role of medical treatment plans, and that exercise is an important therapy.

The adult guidelines encourage individuals to exercise for at least 30 minutes, five days a week. Children

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should be introduced to exercise to reduce health risks and childhood obesity. As podiatrists, we can en-

Shoe Evaluation Test

The simple shoe evaluation test can be demonstrated to your patients in three easy parts: torsional rigidity, heel counter rigidity, and flexion sta-

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courage walking, which is a great form of exercise. Athletic shoes

(walking or running) and socks are the most important pieces of exercise equipment. We need to encourage regular cardiovascular exercise and individualize our patients' exercise program.

Exercise involves a lifestyle change, making it a regular part of their every-day schedule.

Exercise prescription can help in the prevention, treatment, and rehabilitation of injuries, and encourage a healthier lifestyle. Motivational factors are very important as well. Our treatment outcomes can be more successful if we incorporate exercise into the overall treatment plan. The goals of treatment are to keep our patients moving as pain free as possible.

Walking is a relatively safe type of exercise for most of our patients, and we are all experts. There are many social benefits for walking in groups, making it fun and interactive for all ages and types of patients. To keep walking from being too routine, patients should vary intensity, level, and terrain. It can be done on different surfaces and it is relatively low impact. Mechanics and balance issues can be individually addressed, and safety issues may need to be addressed as to time of day, weather, neighborhood safety, terrain, and traffic.



bility. The less motion in these three areas, the more stability the shoe

has. Most of your patients who pronate excessively may need to avoid a walking shoe with a soft heel counter, excessive flexion in the midfoot area, and excessive torsion between the forefoot and the rearfoot area.

Key Principles of Exercise Prescription

Training and exercise programs need to be regular/long-term and



which could also consist of a different activity (cross-training). Working out or exercising should be fun and enjoyable; otherwise, it will be more difficult to stick with.

Three Principle Roles for Physicians

Mentioning: mention regular exercise on a regular basis. Be able to refer to outside resources.

Motivating: provide detail on the motivational process and how to mobilize it.

Modeling: become a role model. The hard part of exercise is doing it regularly!

Types of Regular Exercise

Forward motion: exercise walking, power walking, running, cycling, rowing, swimming. It is im-

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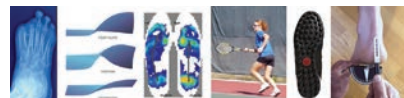
must be incorporated into lifestyle as a daily habit or part of one's schedule. Moderation is the key. The program needs to balance the workload, and we need to caution about overtraining, as many of the injuries we treat on a daily basis are from overuse. The patient needs to establish realistic and obtainable goals. Training schedules should be set up over specific time periods. Regular rest periods should also be scheduled,

portant to measure exercise in minutes, not distance.

In place: aerobic dance, weight training, elliptical trainer.

A key point is that patients are in control of what they actually do. Making time for exercise is key also--the patient needs to add exercise into his/her current activities. Activity can be combined with socializing. Identify wasted time during the day and fill

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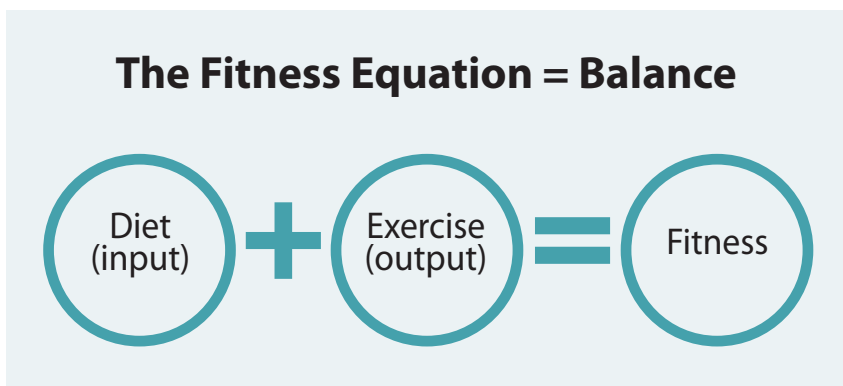
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it with activity. Potential obstacles to exercise include: breaks in schedule such as vacation or illness, pain and discomfort, poor equipment, soreness, stiffness, etc.

Intensity should have a gradual increase as tolerated. You should never increase more than 10% (10% rule).

Where to Exercise: the exercise environment includes outdoors, home, and a gym or fitness center. There are pros and cons to each environment, and it may be modifiable.

Biological Factors: exercise can improve body composition, improve lipid lipoprotein profiles, improve glucose homeostasis and insulin sensitivity, improve autonomic tone, enhance immune system function, reduce blood pressure, reduce systemic inflammation, decrease blood coagulation, improve



coronary blood flow, augment cardiac function, enhance endothelial function, and improve psychological function. So, the health benefits of exercise show that higher fitness levels are associated with better risk profiles, lower risk of all-cause mortality and cardiovascular events, improvements in bone density and articular strength, and lower risk of developing functional limitations and non-fatal disease.

Activity and Age

The Surgeon General's report on physical activity concluded that the percent of time Americans spend in physical activity decreased as their age increased. Lower levels of activity were strongly related to weight gain. Patient surveys show that nearly 2/3 of patients would be interested in exercise prescription from their doctor. Lower levels

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of activity severely impact balance, strength, endurance, flexibility, and carrying out routine daily activities. Activity is a key element of fall prevention.

In your geriatric patients, address chronic illness as well as advancing age. Sedentary behavior closely mimics aging. A regular exercise program will improve their functional capacity, reduce the risk of chronic disease, and improve their quality of life. This population is the least physically active group, and by 2030 over 20% of the population will be over 65. Exercise prescriptions in older adults should be of lower intensity, but go beyond minimal recommendations. Incorporating resistance, flexibility, and balancing exercises are very helpful in keeping up fitness levels and preventing falls. Patients will need positive reinforcement; em-

Exercise Is Medicine Initiative

- Raise public awareness
- Emphasize the importance to physicians and health professionals
- Easiest and cheapest medicine around
- Exercise is an important therapy



minutes or more of exercise each day. Exercise should include vigorous intensity, and muscle- and bone-strengthening exercise. Active lifestyle needs to be acquired during childhood by instilling a positive attitude towards exercise in a school setting. Less than half of 6-11 year old children and only 8% of adolescents in the U.S. meet exercise recommendations.

Goals of Exercise in Children

Children need safe and effective organized activities which are age-appropriate. Developmentally-appropriate activity based on motor skills will help build fitness levels, as well as providing for learning social skills, teamwork, and having fun. Free play that is loosely structured can provide much of their activity time. It is also important to encourage children to participate in a variety of sports vs. specializing in one sport to reduce chances of overuse, and to cross-train different muscle groups.

Nutritional Guidelines

Healthy eating habits include eating smaller portions, choosing low glycemic foods, avoiding sugar and sweeteners, reducing refined and processed carbohydrates, and limiting or avoiding fast foods. Encourage the eating of fresh vegetables, fruits, and lean meats. Drinking plenty of fluids is also very important. **PM**

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phasize social support, safety, active choices, and self-efficacy.

Effects of Exercise on Diabetes

Exercise has many positive effects on both prevention and treatment of diabetes. It improves blood glucose control along with diet and medication with type 2 diabetes. It improves insulin sensitivity and results in the need for less medication. It provides cardiovascular benefits and reduces body fat. Exercise and diet can actually prevent type 2 diabetes.

Physical Guidelines for Children

Children should be getting 60

minutes or more of exercise each day. Childhood obesity has many influencing factors. A sedentary life style of video games, TV, less physical education and less outdoor playing all contribute. Many students are driven to school instead of walking or cycling. Poor nutrition and eating habits commonly involve too much fast food, fewer vegetables and fruits, increased soda and sugar intake, and school menus that do not offer healthy food choices. Combining physical activity with healthy eating habits will allow children to develop to their full potential and reduce health risk and chronic disease later in life.



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