

Physically Active For Life
Manual For Physicians

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Preface

This manual has been developed to supplement the training in exercise counseling provided by the Physically Active for Life (PAL) project staff. It provides an introduction to the principles of exercise counseling, guidelines for exercise prescriptions and protocols for providing exercise counseling in the primary care setting. With the training provided by PAL staff, this manual will help guide you in promoting exercise among your sedentary older patients. Further information on the studies referenced in the manual can be found in the bibliography.

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Section 1: Definitions of Terms

The following terms appear in this manual and are defined below to insure a common understanding of their meaning.

Physical activity = bodily movement by skeletal muscles results in expenditure of energy (measured in METS as compared to rest).

Physical fitness is sometimes used to be synonymous with **Cardiorespiratory fitness**. This is not accurate.

Physical fitness encompasses all aspects of fitness including: **Cardiorespiratory fitness**, flexibility, appropriate body composition, muscular strength and muscular endurance.

Cardiorespiratory fitness is measured during an exercise treadmill test and is reported as maximum oxygen uptake or VO_2 max.

Exercise = planned repetitive bodily movement to improve or maintain component(s) of physical fitness aerobic or anaerobic.

Note: There is obviously a lot of overlap in what is defined as exercise or physical activity. During the course of this project, you may find that we use the terms interchangeably.

Vigorous exercise = engaging in strenuous activities such as: biking, jogging, roller blading, swimming, singles tennis **or** exercising to raise heart rate to >70% of maximal heart rate or exercising and getting very sweaty

Moderate exercise = engaging in more moderate activities such as: walking, doubles tennis, golf without a cart, dancing **or** exercising to raise heart rate to 50-70% of maximal heart rate or exercising and breaking a sweat

Maximum Heart Rate = The highest heart rate value attainable during an all-out effort to the point of exhaustion. Maximum heart rate can be estimated as **220 - age**.

Sedentary = For the purposes of this project, we will use sedentary to mean - not currently physically active for 60 minutes per week over a typical two week period.

MET or metabolic equivalent = a unit used to estimate the metabolic cost (oxygen consumption) of physical activity. One MET equals the resting metabolic rate, $\frac{3.5 \text{ ml. O}_2}{\text{kg} \times \text{minutes}}$

Section 2: Why Counsel About Exercise?

This section will discuss some of the reasons to counsel your patients to increase their level of physical activity. They include:

1. The medical benefits of exercise
2. The high prevalence of sedentary lifestyle among older patients.
3. The important role that primary care physicians can play in influencing their patients' healthy behaviors.

1. The Medical Benefits of Exercise

A) Improved Fitness: Exercise clearly promotes cardiorespiratory fitness as measured by VO_2 max.

VO_2 max decreases with age. As VO_2 max decreases, so does level of function and ability to carry out activities of daily living (ADLs).

Sedentary individuals lose about 10% of their VO_2 max each decade, while active individuals lose about 5% of their VO_2 max each decade.

For example: An active 70 year old man can have the VO_2 max of a sedentary 50 year old man.

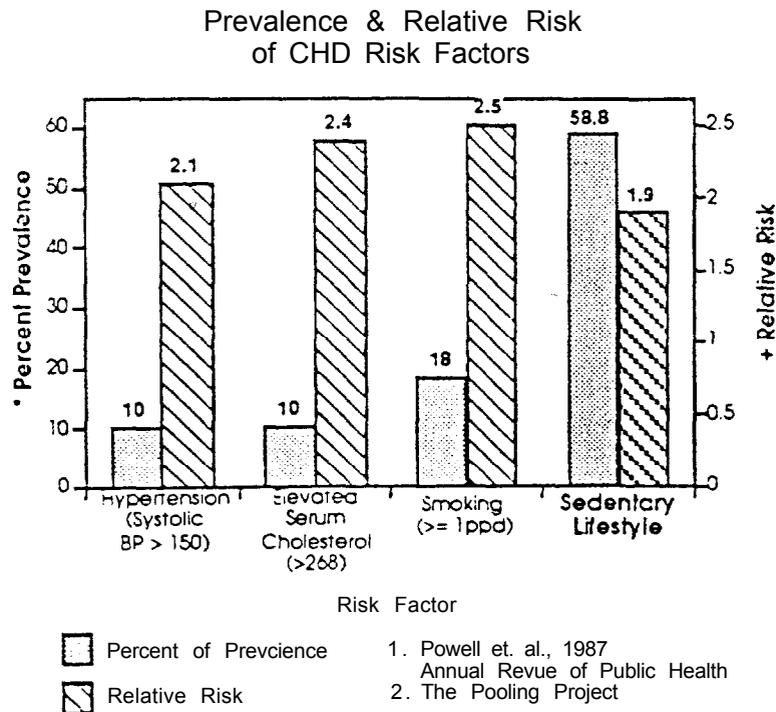
B) Reduction of All Cause Mortality: Several major studies have shown that higher levels of both fitness and physical activity are correlated with lower rates of all cause mortality.

1. Harvard Alumni Study (Paffenbarger) - 1986 (Activity)
2. Blair study - 1989 (Fitness)
3. Copenhagen Male study (Hein) 1992 (Activity and Fitness)
4. Norwegian Male Study (Sandvik) 1993 (Fitness)

C) Coronary Artery Disease Prevention

- **Most** consistently proven benefit of exercise is primary prevention of coronary artery disease.
- Center for Disease Control (CDC) and the American Heart Association (AHA) have included sedentary lifestyle as a CAD risk factor comparable to smoking, hypercholesterolemia and HTN.
- The high prevalence of a sedentary lifestyle makes this as important a health issue as addressing other risk factors for CAD.
- A meta-analysis of 43 studies (Powell 1987) found that the relative risk of CAD for those with a sedentary lifestyle was 1.9. (better studies found a higher relative risk). (Figure 1)
- Lowering risk of CAD has been shown for occupational activity, leisure activity and total daily activity.
- The relationship between quantity of physical activity and prevention of coronary heart disease is characterized by a positive dose-response relationship across all levels of physical activity.

Figure 1



*MMWR 7/10/87

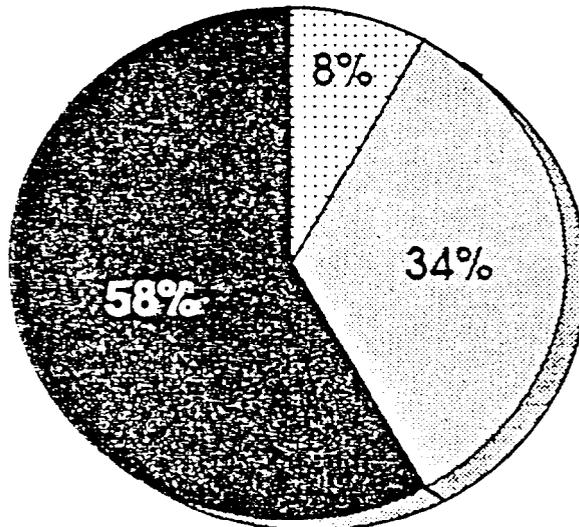
D) Other Medical Benefits

- Physical activity is associated with weight control in randomized trials (independent of dietary intake)
- Exercise increases insulin sensitivity in NIDDM and improves glucose tolerance.
- Physically inactive persons have a 35-52% increased risk of developing hypertension (Blair et al, 1984)
- Increasing physical activity decreases triglycerides and increases HDL (although no independent effect on total cholesterol and LDL)
- There is a positive association between physical activity and affect, self esteem and general sense of well being.
- Several controlled trials have shown that post-menopausal women may retard bone loss by doing physical activity. Walking more than 1 mile a day decreases bone loss in the lower extremities. There is also some evidence for a decreased incidence of hip fractures.

2. Prevalence of Sedentary Lifestyle

Studies estimate that nearly 60% of the adult population have a sedentary lifestyle. The prevalence of the other top three risk factors within the population are smoking (25%), elevated cholesterol (10%), and hypertension (17%) (Pooling Project Research Group 1978).

Prevalence of Different Activity Levels
Percent of Population



- Vigorous (active at least 3 times per week, >= 20 minutes, >60% MHR)
- Regularly Active, but at low intensity (3 times per week, >= 20 minutes, <= 60% MHR)
- Sedentary Lifestyle (irregular or no physical activity)

Morbidity and Mortality Weekly Report, 1990, CDC, 39(32) 541-544.

3. It Doesn't Take Much Exercise to Achieve Health Benefits

a. Exercising at an intensity of 60% of max HR at least 3x a week for 20-30 min. at a time is recommended to assure improvement in **cardiorespiratory fitness**.

b. Decreased risk of **all cause mortality, CAD, and cardiovascular death** follows a **dose-response curve** across all levels of physical activity.

Benefit is seen at levels of physical activity less than required to achieve cardiorespiratory benefit.

c. Those who are the most sedentary have the greatest relative risk of cardiovascular morbidity and mortality and derive the greatest benefit from increases in physical activity.

d. The amounts of physical activity necessary to achieve **the other medical benefits** discussed have not been well studied but are thought to be less than is necessary for cardiorespiratory benefit.

e. Research suggests that 10 minutes of physical activity done three times a day can provide important health benefits. (DeBusk, 1990)

Section 3: Safety/Precautions and Risk Assessment

It is important to consider the risks of exercise for individual patients and to adequately evaluate them before advising them to increase their level of physical activity. The areas of potential risk that we will consider are:

- Orthopedic injury
- Sudden cardiac death
- Diabetes

1. Orthopedic injury

All patients should be able to exercise safely without an increased risk of injury if the proper precautions are taken.

- Perform a physical exam to evaluate for flexibility, strength, sensory deficits, joint integrity and make appropriate modifications in the exercise prescriptions.
- Prescribe gentle static stretching as part of a warm-up before starting an activity and a cool-down after they're done. See the appendix for more information on stretching exercises.
- Caution patients against too much too soon. For example, sedentary patients should start off exercising for 10 minutes at a time.

2. Risk of Sudden Cardiac Death

Patients die from coronary artery disease not from exercise.

- Sudden cardiac deaths have been associated with vigorous activity but are extremely rare.
- Habitual physical activity reduces the overall risk of primary cardiac arrest, despite a transient increase in risk during vigorous activity (Siscovick, 1984, NEJM).

3. Screening Tests

The need to screen asymptomatic individuals for coronary artery disease prior to their increasing their level of exercise is a controversial subject. There is limited research examining the usefulness of any pre-exercise screening tests.

- The American College of Sports Medicine (ACSM) recommends a screening exercise treadmill test (ETT) in all asymptomatic women over the age of 50 and men over the age of 40 and all individuals with two or more cardiac risk factors who

wish to begin a program of vigorous exercise. ACSM does not recommend ETT for asymptomatic women over the age of 50 and men over the age of 40 who wish to begin a program of moderate exercise.

- The U.S. Preventive Task Force Service gives ETT a class D rating for screening asymptomatic individuals for exercise (they recommend against it).
- The use of ETT for pre-exercise screening of an asymptomatic, low-risk population has been criticized as not practical due to:
 1. the high cost of the test
 2. the high false positive rate in asymptomatic populations
 3. when studied, the ETT has been found to be a poor screening tool.
- One would have to screen 10,000 asymptomatic men ages 35-55, with risk factors (with ETT) to discover one likely to die during exercise. And four likely to die would go undiscovered. (Chillag, 1990) Note: There is no data on ETT screening for older adults.
- The PAR-Q Readiness questionnaire was developed in Canada for screening large populations prior to initiating exercise. This self-administered questionnaire has been shown to be a very effective screening tool. The PAR-Q can be used to elicit information on cardiac risk factors and has been included in the appendices.

For the purposes of this study

For the purposes of this study, our screening recommendations are:

- Most older patients will be starting to exercise at an intensity that would not warrant a screening ETT.
- Instruct patients to report the early warning signs of CAD.
- For patients over 50 who wish to begin to exercise at a vigorous level, or patients with multiple cardiac risk factors, you might consider a screening ETT.
- Patients with chronic, stable CAD can safely begin-to slowly increase their level of physical activity with the same guiding principles that apply to the asymptomatic patient.

4. Special Considerations: Safety/Precautions in Diabetic Patients

- Don't prescribe exercise for patients with IDDM unless the patient has good glycemic control.
- Diabetic patients should have an eye exam to screen for risk of retinal detachment during exercise.
- Instruct patients to increase attention to and monitoring of foot care.

Section 4: Principles of Behavior Change

1. A Model to Understand How People Change

Most sedentary patients are **not** ready to begin a program of regular exercise. Providing unmotivated patients with simple advice and a prescription for exercise is unlikely to lead to significant change in their level of physical activity. These facts are derived from a large body of research which studied the course of behavioral change in several groups of individuals at risk for the development of disease. The **Transtheoretical Model of Change**, was developed from these studies. By characterizing the stages and processes associated with the adoption of regular exercise, the Transtheoretical Model offers a strategy for intervening with the majority of sedentary individuals who are not ready to begin a regular exercise program when they visit a physician's office.

The Transtheoretical Model identifies five discrete stages of adoption of regular exercise: precontemplation, contemplation, preparation, action and maintenance. See Figure 1. Individuals at the **Precontemplation** stage, who may represent as many as 24% of individuals are not considering making any changes in their level of exercise in the foreseeable future, (Marcus Rossi, Selby, Laura and Abrams, 1992). These patients may be uninformed or underinformed, demoralized about their ability to change, or defensive and resistant to change.

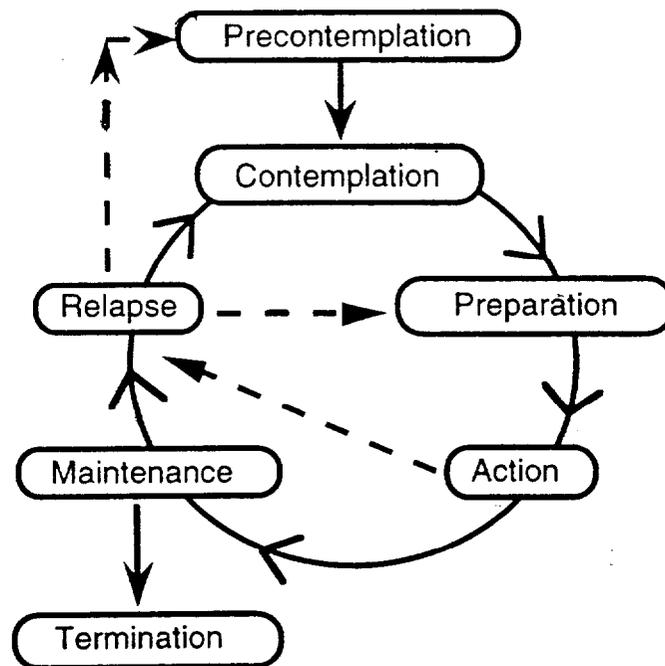


Figure 1. The Transtheoretical Model of Change

Contemplation is a stage of ambivalence that characterizes another 33% of sedentary individuals. Though individuals at this stage have given serious thought to beginning a program of regular exercise, they are not yet ready to commit to this. Most individuals in the contemplation

stage rate the reasons for not being active (cons) only slightly higher than the benefits (pros). Only about **10%** of people are in the **Preparation** stage and are willing to start a program of regular exercise within the near future. Many of these patients have taken steps toward becoming more physically active, such as planning one or two short walks per week, or gardening on weekends.

When individuals finally reach the **Action** stage, (10% are in this stage) they are meeting the criteria for regular physical activity (3 or more periods of vigorous exercise totalling at least 60 minutes per week or 30 minutes of moderate exercise at least 5 days per week). Relapse is the rule during this stage, rather than the exception, especially during the first few weeks after beginning a program of regular physical activity. **Maintenance**, defined as the stage reached 6 months after meeting the criteria for regular exercise, is characterized by continued use of processes which help individuals to continue regular physical activity and prevent relapse. Approximately 22% of individuals can be classified in Maintenance.

2. How Can the Transtheoretical Model Help You to Be More Effective in Counseling Your Patients to Engage in Regular Exercise?

- Modify your expectations - the vast majority of patients who visit a physician's office aren't ready to begin a regular exercise program, but you can help move them along the stages of change.
- Utilize strategies to attain intermediate outcomes, such as moving a precontemplator to the contemplation stage. You are less likely to become frustrated.
- Match intervention strategies to the patient's stage of change. This will enhance movement through the stages and shorten the time it takes to reach action and maintenance.

3. Patient-Centered Approach to Counseling

There are five levels of the patient education and counseling process: cognitive; attitudinal; instrumental; behavioral; and social [Grueninger, 1989] (See Figure 2). At each level, there is an opportunity for both assessment and intervention [Goldstein, et al., 1994]. Assessment involves gathering data from the patient to identify barriers and resources that may impede or facilitate patient education and behavior change. Assessment allows the physician to tailor an educational intervention to meet the patient's individual needs. Intervention includes providing the necessary information, support and skills to help the patient overcome barriers and utilize resources.

This generic patient-centered approach to patient education and counseling can be applied to the areas of exercise counseling and transformed into series of questions and statements, outlined in Table 1.

Levels of Patient Education

Doctor-Patient Interaction

(Assessment and Intervention)

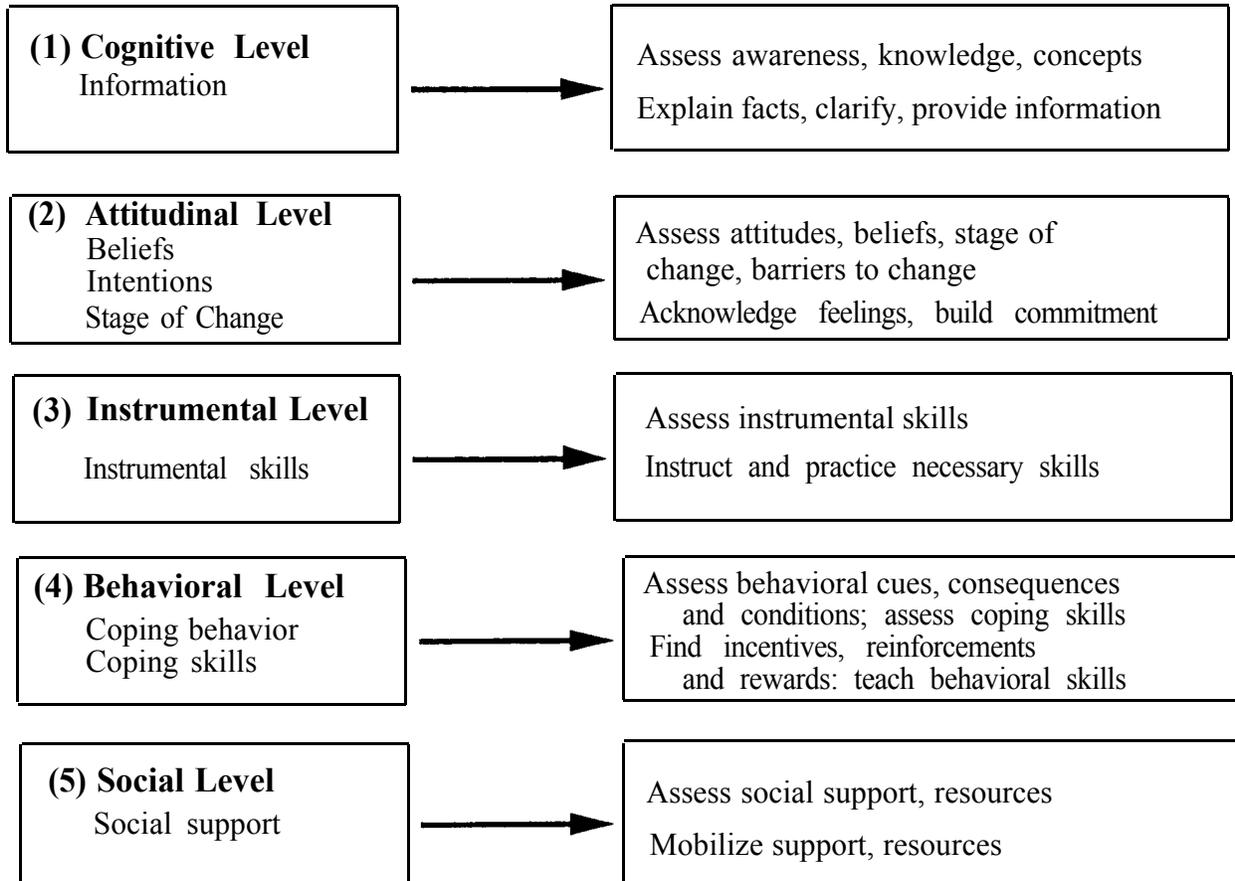


Figure 2. A Patient Centered Approach to Counseling

Section 5: Matching Counseling to Stages of Change

See Protocol, pg 20

1. For Precontemplators:

- Assessment is key: assess patient's knowledge, attitudes, beliefs, fears, and pros and cons for making changes in physical activity.
 - Correct misconceptions and provide accurate information about benefits of physical activity and exercise.
 - Provide personalized messages about risk
 - Address feelings and provide support
 - Provide resources - refer to patient manual
- Arrange follow-up

For example, a patient may be under the false impression that there is no benefit to beginning physical activity once hypertension or coronary artery disease has developed. Informing this patient of the decreased risk of cardiac events and mortality after beginning regular physical activity may move them to contemplation or preparation for action.

Clarification, legitimation, and expressions of support and respect may help the patient to feel understood. As a result, the patient may feel more comfortable talking to the physician about their behavior and thus be more receptive in the future to offers to help them to change. To illustrate, a patient who expresses guilt and shame about their failure to begin an exercise program may respond positively to such statements as, "It's very difficult for many people to exercise regularly. It's great that you are willing to think about it". Expressions of optimism about eventual success may also prove useful to demoralized patients.

2. For Contemplators:

- Praise interest in beginning an exercise program
- Acknowledge and reinforce patient's reasons for wanting to exercise (PROS)
- Identify remaining barriers to activity (CONS)
- Help to overcome barriers
- Elicit patient's preferences and negotiate initial steps toward regular exercise
- Identify available resources and supports
- Write exercise prescription
- Provide resources - refer to patient manual
- Arrange follow-up

Identification of barriers to change enables the health care provider to offer potential solutions that might then free the patient to seriously consider change. Provide examples of how to overcome barriers, and focus on the benefits of physical activity.

3. For Patients in Preparation:

- Praise current level of activity
- Reinforce benefits patient has noted and suggest others (PROS)
- Identify remaining barriers to activity (CONS)
- Help to overcome barriers
- Negotiate further steps toward achieving a regular exercise program
- Identify available resources and supports
- Write exercise prescription
- Identify potential triggers for relapse and plan response
- Provide resources - refer to patient manual
- Arrange follow-up

4. For Patients in Action and Maintenance:

- Praise current level of activity
- Reinforce benefits patient has noted and suggest others
- Encourage self-monitoring and self-reward
- Identify barriers to continued activity
- Help to overcome barriers to continued activity (avoid relapse)
- Reinforce use of resources and supports
- Write new exercise prescription
- Provide resources - refer to patient manual
- Arrange follow-up

5. The Importance of Follow-up

The results of each intervention can be assessed and adjustments made to meet the needs of the patient as they emerge. When the patient who is initially in precontemplation or contemplation is finally ready for action, appropriate action-oriented strategies can be provided.

Arranging follow-up is an essential component to an effective counseling intervention, especially for patients in action or maintenance. At the follow-up visit, the patient's adherence to the plan can be assessed. For the majority of patients who will have difficulty adhering to the plan, the provider can identify and analyze problems that led to relapse or slips (e.g., a few days of not participating in planned activity) and help the patient to develop a revised plan to overcome any problems or obstacles that have arisen. Most importantly, follow-up visits also provide an opportunity for the provider to review what the patient has done well so they can provide praise, reinforcement and encouragement. It is useful for the provider to remind the patient that successful behavior change almost always requires multiple trials and continued vigilance for potential relapse. Relapses and slips, often experienced as failures by the patient, can be reframed as an opportunity for learning and corrective action (Marlatt and Gordon).

Table 1: A Patient-Centered Approach to Risk Factor Intervention - The Five A's

Address the Agenda

- Attend to patient's agenda
- Express desire to talk about risk factors
"I'd like to talk to you about your level of physical activity"
- Define problem
"You are _____" (e.g., inactive, active only occasionally)
"This means _____"

Assess

- Assess and clarify patient's knowledge, beliefs and concerns
"What do you know about _____?"
- Assess and clarify patient's feelings about risk and change in behavior
"How do you feel about _____?"
- Assess patient's previous experience with activity
"What have you tried in the past?"
- Assess stage of change and clarify patient's goals
"Are you willing to increase your level of physical activity now?"
"Are you considering changing in the next few weeks?"
- Assess pros and cons for change
"What reasons do you have for wanting (and not wanting) to change?"

Advise

- Provide personalized information regarding risk and benefits of change
- Provide physiologic feedback when available
"Your test results (physical findings, etc.) indicate that _____ is affecting your health"
- Tell patient that you strongly advise change

Assist

- Provide support, understanding, praise and reinforcement
"I can help you by _____"
"It's often difficult to change _____"
"It's great that you're considering _____"
- Describe intervention options
- Negotiate an intervention plan - Match intervention to stage of change

For Precontemplators and Contemplators:

- Review patient's pros and cons for change: reinforce pros; express willingness to help patient address cons
- Provide more information, feedback
- Address feelings
- Encourage to consider change

For patients in Preparation and Action stages

- Negotiate selection among options
- Solve problems with implementation
- "What problems might arise with _____?"
- Provide resources (e.g., written materials)
- Identify additional resources
- "What (or who) might help you with _____?"
- Teach skills/recommend specific strategies
- Consider a written contract/prescription
- Refer, when appropriate

Arrange follow-up

- Reaffirm plan
“Now, what are you going to do?”
- Arrange follow-up appointment or call
“I'd like to see you again on”

Adapted from [Glynn, 1988; Goldstein, et al 1994; Grueninger, 1989; Prochaska and Goldstein, 1991]

Section 6: Exercise Prescriptions - What to prescribe?

For patients ready to begin some activity, the four basic components of an exercise prescription are:

- **F**requency
- **I**ntensity
- **T**ime
- **T**ype of Activity

1. Exercise Prescription: Frequency

- The frequency of exercise will depend on the intensity and duration of exercise as well as the needs and lifestyle of the individual.
- Lighter intensity activities (walking or gardening) can be started off at 5 - 7 times/week.
- For patients participating in vigorous exercise, three sessions a week is adequate as an ultimate goal.
- If patients are going to exercise at a moderate or aerobic intensity (HR=50-70% of maximum HR) then start with 3x/week.
- Older patients who are more likely to start off with very light activity may benefit from working an increase in physical activity into their daily routine, (for e.g., walking the dog).

2. Exercise Prescription: Intensity

- Intensity is defined in terms of both heart rate and perceived exertion.
50-70% of max heart rate = moderate exercise
>70% of max heart rate = vigorous exercise
- The intensity of exercise necessary for the development of cardiorespiratory benefit should not be prescribed initially to an unfit sedentary individual
- Lower intensity activities at increased frequency may suit older patients well.

Monitoring the intensity of exercise can be done in several ways:

1. Determining patients' desired heart rate zone (i.e. %max HR) and instructing patients to take their pulse while exercising.

Patients can use the chart on the following page to determine their target heart rate for 15 seconds.

Heart Rate Chart

Age	Max HR	Heart Rate Range			
		Moderate Activity 55-70% Max HR 60 sec. 15 sec.		Vigorous Activity 70-85% Max HR 60 sec. 15 sec.	
30	190	105-133	26-33	134-162	33-41
40	180	99-126	25-32	127-153	32-38
50	170	94-119	24-30	120-145	30-36
60	160	88-112	22-38	113-136	28-34
70	150	83-105	21-26	106-128	26-32
80	140	77-98	19-25	99-119	25-30

2. Talk/Sweat test - if patients are be able to talk comfortably but get a little sweaty, this usually indicates that they are within the 50-75% max HR or moderate exercise zone.
3. Borg perceived exertion - patients are asked to estimate their level of perceived exertion on a 10 point (or a 20 point) scale. Instruct them to start at 2-3 and work their way up to 7 or 8.

Borg Perceived Exertion Scale*:

<u>10-grade scale</u>	<u>%maximum heart rate</u>
0 nothing	
0.5 very, very weak (just noticeable)	
1	<30%
2 weak (light)	
3 moderate	
4 somewhat strong	30-49%
5 strong (heavy)	
6	50-74%
7 very strong	
	75-84%
9	
10 very, very strong (almost maximum) maximum	>85%

*Permission pending

3. Exercise Prescription: Time

- Length of exercise sessions should depend on the type of activity and frequency of exercise as well as the stamina of the patient.
- For most patients doing light to moderate exercise, an ideal goal is a session that consists of:
 - Warm up: 10 min.
 - Activity: 15 - 20 min.
 - Cool down: 10 min.
- Optimally, each exercise session should be at least 10 minutes to derive benefit.
- Older individuals: may start with decreased duration and increased frequency.
- Total duration time of exercise is more important than how the time is divided up. For example, 6-15 minute sessions per week is just as valuable as 3-30 minute sessions.

4. Exercise Prescription: Type of Activity

- Something the patient enjoys or has done previously.
- Exercise/activity that involves large muscle groups in a rhythmic manner for a prolonged period of time is most helpful.
- Stretching, walking, swimming, cycling, gardening, housework (i.e. dusting, sweeping, vacuuming and washing the floor), mowing the lawn and dancing.
- Lower intensity activities have higher adherence rates.

5. Exercise Prescription: Change in Lifestyle

In addition to prescribing a specific exercise program for your patients, it is important to address their overall outlook on physical activity and provide suggestions as to how they might make simple changes in their lifestyle which might benefit their health. For example, suggest that they:

- take the stairs instead of the elevator at work
- park their car further away from the mall or supermarket
- walk instead of drive for some shorter distance errands

Additional guidelines for patients:

1. Exercise only when feeling well. Wait a couple days after a bad cold or flu before resuming activity.
 2. Wait 2 hours after eating to engage in vigorous activity. A slow walk can be done safely after a meal.
 3. Be sure to adapt exercise to warm weather. Slow the pace and make sure to drink plenty of fluids.
 4. Wear comfortable clothing.
- continued on next page....*

5. Flat and soft, well cushioned shoes are recommended for most forms of exercise.
6. Discuss any worrisome symptoms with your physician. Alert your physician about any chest, arm, neck or jaw pain, wheezing, extreme shortness of breath or dizziness during exercise.
7. Mild, general muscle soreness is common when beginning an exercise program. However, if any pain develops in bones or joints, alert your physician.

6. Exercise Prescription: Follow-up

- Assess level of activity
- Reassess stage of change
- Address safety
- Solve problems
- Assess for overuse Injuries
- Provide reinforcement and praise for patient's efforts

7. Exercise Prescriptions: Special considerations for the older adult

- More modest goals than you would have for younger patients.
- They can benefit from stretching, toning and small increases in activity.
- Prescribe lower intensity activities at greater frequency.
- Alternate upper body and lower body activities.
- Activity can prevent loss of muscle mass seen in elderly.
- Increased activity levels can prevent decreases in fitness and functioning.

Section 7: Counseling Protocols

1. Not Active and Not Thinking About Becoming Active (Precontemplators)

Goal: To think about becoming active.

Define the problem

- I can see from the information that you provided that currently you're not physically active.
- I would like you to become more physically active.

Assess patient's understanding of the problem and the benefits (pros) for patient

- What do you think would be the benefits of increasing your physical activity?
- Correct misunderstandings and misperceptions
- Provide information about benefits by personalizing to patient's health

Assess patient's worries/concerns/expectations about activity

- How do you feel about becoming more active?
- Address feelings and provide support

Assess and address barriers (cons)

- What keeps you from being active?
- What have you tried in the past?

Provide support and partnership for patient identified barriers

- I can help you by.....
- Praise interest

Negotiate a plan

- What steps are you willing to take to become more active?

Exercise prescription

- Think about benefits of activity
- Read "**On Your Mark**" section of manual
- Arrange follow-up appointment

2. Not Active But Thinking About Becoming Active (Contemplators)

Goal: To begin some regular activity/exercise.

Praise and reinforce patient's interest in activity

-Reinforce patients' reasons for wanting to become active (pros)

Assess barriers (cons)

-You've thought about being active: what keeps getting in the way?

-Address one major barrier and refer patient to the manual for how to overcome other obstacles

Provide injury prevention information

-Start slowly.

-Use appropriate equipment (e.g., shoes)

Elicit preferences for types of exercise and negotiate plan of action (modest goals)

-What have you done before?

-What did you enjoy doing?

-What are you willing to do?

-Where would you like to start?

Identify barriers that may occur in the plan

-What problems may arise?

Identify resources available

-Who or what might help you to implement your plan?

Assess patient's confidence in the plan

-How do you feel about your plan?

Exercise prescription

-Use FITT format for activity

-Read "**Get Ready**" section of manual

-Arrange follow-up appointment

3. Active Occasionally But Intends to Become Active More Regularly (in Preparation)

Goal: To help patient to begin a regular exercise program.

- ***Regular Moderate Activity.*** * 30 mins. per day in units of 10 mins. or more on at least 5 days per week
- ***Vigorous Activity:*** 20 mins. per day on at least 3 days per week.

Reinforce current activity

Identify benefits of regular activity for patient (pros)

- What benefits have you noticed since you started exercising?
- What additional benefits do you hope to receive?

Identify any remaining barriers to increase activity (cons)

Help patient to overcome barriers

- What would help you to become regularly active?
- You have overcome some barriers, what else might get in the way?
- Identify cues, prompts and supports for activity
- Provide support for patient's efforts

Lapse prevention

- Identify high risk situations (e.g., vacations, illness, boredom)
- Help patient to plan to overcome such obstacles

Negotiate plan for regular activity

- Assess potential obstacles in plan
- Help patient to problem solve

Exercise prescription

- FITT
- Read “**Get Set**” section of manual
- Arrange follow up appointment

4. Active Regularly for Less Than 6 Months (in Action)

Goal: To maintain regular activity & prevent relapse.

****Regular Moderate Activity: 30 mins. per day in units of 10 mins. or more on at least
5 days per week.***

****Vigorous Activity: 20 mins. per day on at least 3 days per week.***

Reinforce patient's progress

-Help patient to focus on benefits and enjoyment of activity.

Assess any problems

Lapse* prevention

-Inform patient about high risk situations (unpleasant weather, injury, vacation)

-Assess patient's plan to cope with such situations (use avoidance or minimize risk)

Find and use social support

Injury prevention (over-use injuries)

-Use appropriate shoes and other equipment.

Relapse prevention**

-Express understanding for shame, guilt associated with lapses

-Reframing lapses into learning opportunities

Negotiate goals

Assess patient's confidence in continuing to be regularly active

-Address any barriers identified

Exercise prescription

-FITT format

-Read "Go" section of manual

-Arrange follow-up appointment

* Lapse=Few days of not participating in planned activity.

** Relapse=A series of lapses.

**5. Active Regularly for 6 Months or More
(in Maintenance)**

Goal: To Maintain Regular Activity and Prevent Relapse

****Regular Moderate Activity: 30 mins. per day in units of 10 mins. or more on at least
5 days per week.***

****Vigorous Activity: 20 mins. per day on at least 3 days per week.***

Review and reinforce progress

Assess patient's feelings about progress/slips/problems

Injury prevention

-Use appropriate equipment

Negotiate goals

-Self-monitor

-Suggest patient as a role model for activity

Assess coping with lapses

-Offer support and understanding

-Help patient problem solve

Assess patient's confidence in continuing to be regularly active

Exercise prescription

-FITT format

-Read "**Keep Going**" section of manual

-Arrange for follow-up appointment

Section 8: How to Get Past Physical Activity Roadblocks

Roadblock

How To Get Past It

I don't enjoy exercise	Think of activities you enjoy that get you moving. Don't think of it as "exercise". There's no need to huff and pant.
I'm too old.	Activity is good for you, no matter how old you are.
I'm afraid of being injured.	Injuries are less likely if you start out slowly, increase your pace gradually, and maintain a regular activity schedule. Also, be sure to discuss any concerns with your doctor.
I'm usually too tired.	The good news is that once you become a little more active, you'll find you have more energy.
I don't have time.	Any activity is better than none, although we advise 30 minutes 5 times a week. Try planning 10 minute blocks at different times during the day. It doesn't have to be all at once.
I don't stick with it.	Choose an activity you like. Plan it into your routine and give yourself reminders. For example, leave your sneakers by the door at home, or put your exercise clothes in your car so you go for a walk after work.
I don't like to go alone.	Maybe a neighbor or co-worker will be a willing partner---have you asked? Also consider the YMCA or walking clubs at the malls.
Exercise is boring.	Listen to music during your activity. Watch T.V. or read while you are using a treadmill. Walking or biking can take you past interesting scenery. You can also alternate activities, instead of doing the same thing all the time.
The weather is bad.	You need a back up plan for cold or hot days. There are many indoor activities, like stationary biking, low-impact aerobics, or walking in the mall.
I get discouraged.	Unexpected changes in your life may cause you to miss planned activity. Just try to get back to your routine as soon as possible. You can keep going!

Section 9: Community Resources for Physical Activity

The following are resources for physical activity in Bristol County featuring programs especially for older adults.

1. Mall Walks

- **Silver City Galleria, Taunton, MA;** phone: 823-333
2 level mall; 1 level= 1/2 mile
Mall open 6-10 am M-Sat and Sun 8 am-12:00 noon for uninterrupted walking
Walkers given a mileage journal & "Footnotes" newsletter
- **Emerald Square Mall, North Attleboro, MA;** phone: 699-7979
3 level mall; 1 level= 3/8 mile
Mall open 7-10 am M-Sat and Sun 9 am to 12 noon for uninterrupted walking hours
Walkers who register get "Steppin Out" guide and mileage journal
- **Swansea Mall, Swansea, MA;** phone: 679-2543
1 level mall; 1 lap = 2/3 mile
Mall open M-Sat 7-10 am, Sun 10 am to 12 noon for uninterrupted walking hours (enter door by Sears)
Walkers given mileage journal and mileage awards

2. YMCA Programs

All YMCA facilities involve moderate membership fees. Financial assistance is available based on income; application is needed. Payment plans are also available. Members usually pay no further fees for specific programs. Nonmembers can participate in specific programs by paying program fees.

- **YMCA of Greater Fall River**
199 North Main Street, Fall River, MA 02720; phone: 675-7841
 - Early Bird Fitness Walk: Supervised walk
 - Active Older Adult Programs (50+ yrs): Senior Lifefit (non-impact aerobics), Senior Swim, Aquafit classes
 - Cardiovascular (C-V) Center/Gym
- **Taunton YMCA**
71 Cohannet Street, Taunton, MA 02780; phone: 823-3320
 - Active Older Adult Strength Training: Nautilus machines
 - Y's Way to Physical Fitness: beginner aerobics class
 - Y's Way to Water Exercise: 4-week class

— **YMCA of Greater New Bedford**

25 South Water Street, New Bedford, MA 02740; phone: 997-0734

- Flex Ex: 60 min calisthenics program
- Strength Training Center
- Water Exercise: beginner flexibility program
- Aqua Fitness: water aerobics

— **Hockomock YMCA**

300 Elmwood Street, North Attleboro, MA 02760; phone: 695-7001

- Active Older Adults: Senior Fitness, Senior Nautilus
- Aquacise
- Adult swim lessons: beginner through advanced levels

— **Attleboro YMCA**

100 North Main Street, Attleboro, MA 02703; phone: 222-7422

- Muscle Conditioning
- Senior Citizen Gym & Swim: 30 mm aerobics + 30 mm aquacise
- Forever Fit (for 50+ yrs) for 1st time exerciser with info on general health and nutrition
- Aqua-Aerobics: low impact workout in pool

3. Other Programs Offering Reduced Fees

— **Fitness Center, USA**

100 North Front Street, New Bedford, MA 02740; phone: 990-0312
502 Bedford Street, Fall River, MA 02720; phone: 676-5700

- Facility offers low, high, step, non-aerobic calisthenic classes, Lifecycle, treadmills, stairmaster, free weights

— **Swansea Council Of Aging (60+ yrs)**

458 Ocean Grove Ave, Swansea, MA 02777; phone: 676-1831
exercise programs open to all towns

- Low impact aerobic classes: \$1.50/wk, 3x/wk all year
- Swansea Steppers Walking Club

— **North Attleboro Council Of Aging (60+ yrs)**

204 Elm Street, North Attleboro, MA 02760; phone: 699-0131

- Basic exercise program, with discussion on nutrition & other topics, \$1/ class

PHYSICAL ACTIVITY READINESS QUESTIONNAIRE (PAR-Q)*

A SELF -ADMINISTERED QUESTIONNAIRE FOR ADULTS

PAR-Q is designed to help you help yourself. Many health benefits are associated with regular exercise, and the completion of PAR-Q is a sensible first step to take if you are planning to increase the amount of physical activity in your life.

For most people, physical activity should not pose any problem or hazard. PAR-Q has been designed to identify the small number of adults for whom physical activity might be inappropriate or those who should have medical advice concerning the type of activity most suitable for them.

Common sense is your best guide in answering these questions. Please read them carefully and check the YES or NO opposite the question as it applies to you.

YES NO

- 1. Has your doctor ever said you have heart trouble?
- 2. Do you frequently have pains in your heart and chest?
- 3. Do you often feel faint or have spells of severe dizziness?
- 4. Has a doctor ever said your blood pressure was too high?
- 5. Has a doctor ever told you that you have a bone or joint problem, such as arthritis, that has been aggravated by exercise or might be made worse with exercise?
- 6. Is there a good physical reason not mentioned here why you should not follow any activity program even if you wanted to?
- 7. Are you older than 35 and not accustomed to vigorous exercise?

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Patient Eligible Y N

Name: _____

If ineligible, reason _____

Date: _____

Please circle:

Initial Visit

Follow-Up

Exercise Prescription (F.I.T.T.)

Rx:

Type of Activity:

Stretching Calisthenics Walking Cycling Yard Work Dusting Vacuuming

Stationary Biking Bowling Golfing Tennis Mopping Dancing Swimming

Water Exercises Jogging Aerobic Dance Other: _____

How Often: _____ Times per Week/per Day

How Long: _____ Minutes per Session

How Hard: Stretching Only Slow Moderate Brisk

Read this section of the manual:

On Your Mark Pg. 1 Get Ready Pg. 13 Get Set Pg. 29 Go Pg. 39 Keep Going Pg. 51

Return for Follow-Up: One-Month Other: _____

Exercise Assessment

To be completed by research staff

ID:
Date:

Readiness to change

- _____ Precontemplation (On Your Mark)
- _____ Contemplation (Get Ready)
- _____ Preparation (Get Set)
- _____ Action (Go)
- _____ Maintenance (Keep Going)

Assess

1. Current Activity Level:

TYPE (Leisure/House/Work)	FREQUENCY (Times/Week)	DURATION (Mins)	INTENSITY (Light/Mod/Vig)
_____	_____	_____	_____
_____	_____	_____	_____
_____	_____	_____	_____

For each of the following questions, please answer Yes or No.

2. In the past 4 weeks, did you engage in vigorous exercise such as jogging, aerobics, swimming or biking for at least 20 minutes per day, 3 or more days per week?

- 1. No
 - 2. Yes
- If no, go to 3

2a. Have you been exercising vigorously for 20 minutes per day, 3 or more days per week for the past six months?

- 1. No
 - 2. Yes
- If yes, go to 7

3. In the past 4 weeks, did you engage in moderate exercise such as walking, gardening or vacuuming for a total of at least 30 minutes per day, 5 or more days per week?

- 1. No
 - 2. Yes
- If no, go to 4

3a. Have you been exercising moderately for 30 minutes per day, 5 or more days per week for the past 6 months?

- 1. No
 - 2. Yes
- If yes, go to 7

4. In the past 4 weeks, did you exercise moderately for at least 10 minutes at a time, one or more times per week?

1. No 2. Yes

5. Adding up all your exercise sessions over the past 4 weeks, did you exercise for at least 30 minutes per week?

1. No 2. Yes

(For example, you might take one 30 minute walk per week or you might take three ten minute walks per week.)

6. Do you intend to increase your exercise in the next 6, months?

1. No 2. Yes

7. Two Types of Physical Activity In Past: _____ (Like Dislike)

_____ (Like Dislike)

Potential benefits of activity

Potential disadvantages of being active

- _____ improve blood pressure
- _____ help maintain weight
- _____ more energy
- _____ improve cholesterol
- _____ reduce stress/anxiety/improve mood
- _____ improve fitness
- _____ strengthen bones
- _____ improve flexibility
- _____ build stamina
- _____ other (_____)

- _____ fatigue
- _____ less time
- _____ expensive
- _____ causes injuries
- _____ other (_____)

Common roadblocks

- _____ too old
- _____ too tired
- _____ no time
- _____ don't like being active
- _____ never liked sports
- _____ hurt myself due to activity
- _____ existing health problem

- _____ forget to be active
- _____ don't like exercising alone
- _____ bored with activity
- _____ weather is bad
- _____ no convenient place
- _____ will fail
- _____ other (_____)

Exercise Counseling at Follow-up
Physically Active for Life (PAL)

Assess:

- Identify changes in patient's activity level since initial visit.

Advise:

- Provide personalized information on benefits of activity.

Assist:

- Provide exercise counseling utilizing the counseling protocol poster and if appropriate, encourage patient to increase activity. Give a poster to the patient to keep for their reference.
 - Use Exercise Prescription (F.I.T.T. attached).
-

PAL Exercise Counseling

<i>Stage</i>	<i>Goal</i>
<ul style="list-style-type: none">• Not Active; No intention• Not Active; Thinking about activity• Active occasionally• Active regularly <6 months• Active regularly <6 months	<p>Think about becoming active</p> <p>Begin some activity</p> <p>Begin regular exercise</p> <p>Maintain activity & prevent relapse</p> <p>Maintain activity & prevent relapse</p>
Address agenda	“I’d like to talk with you about physical activity.”
Advise	“I recommend... (<i>see goal above</i>)”
Assess	Assess history, concerns, problems, barriers.
Assist	Address concerns, overcome barriers; Negotiate.
Arrange follow-up	Make a follow-up appointment.

	Address agenda	Advise	Assess	Assist	Arrange follow-up
Not Active; No Intention	Define the problem: “You say that you’re not currently active?”	Start thinking about activity	Assess understanding, worries, concerns, expectations, barriers	Address barriers; Provide support & partnership; Personalize benefits; Negotiate a plan	Rx: Think about benefits, read “On Your Mark”
Thinking About Activity	Reinforce interest in activity	Begin Some activity	Assess history, barriers, preferences, resources, confidence in plan	Address barriers; Elicit preferences; Identify resources; Build confidence; Start slow or negotiate first step	Rx: FITT, read “Get Ready”
Active Occasionally	Reinforce current activity	Begin regular exercise	Assess history, barriers, lapse risk	Identify exercise benefits, Address barriers; Injury prevention; Lapse prevention; Negotiate regular exercise plan	Rx: FITT, Read “Get Set”
Active < 6 mos	Reinforce progress	Maintain activity & prevent relapse	Assess problems, social support, confidence, barriers	Problem-solve; Lapse prevention; Negotiate goals; Build confidence	Rx: FITT, Read “Go”
Active > 6 mos	Review and reinforce progress	Maintain activity & prevent relapse	Assess progress, problems, lapses, confidence	Address feelings, problems, lapses; Injury prevention; Negotiate goals; Build confidence	Rx: FITT, read “Keep Going”



Physically
Active
FOR LIFE

A Project in the Division of Behavioral Medicine

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