

LET'S GET PHYSICAL

PHYSIOTHERAPIST
KELLY O'BRIEN FLEXES THE
BENEFITS OF EXERCISE

making your muscles bigger and stronger. This could be especially useful for people experiencing symptoms of HIV-related wasting. Examples include: walking, weight-lifting, deep knee bends, push-ups, chin-ups, bicep curls and using nautilus machines. (You don't need a gym membership—try soup cans or milk jugs as weights.) **Isometric training**—when your muscles contract but your limbs don't move—is another type of resistance exercise. It's good for strengthening muscles that maintain your posture, such as the stomach and lower back muscles. Examples include: yoga, Tai Chi and Pilates.

Stretching is an important part of any exercise program because it improves joint and muscle flexibility and may help to prevent injury. Warm up before you stretch with a few minutes of light activity, like walking. Stretches should be held for at least 30 seconds to maximize the effect. Don't forget to stretch after your activity as well.

THE FITT PRINCIPLE

Frequency. How often should you exercise? To maintain the benefits, exercising 3–4 times per week for an ongoing period of time is recommended.

Intensity. How strenuous should your activity be? Aerobic exercise is usually prescribed so that you're working at a percentage of your maximum heart rate (usually around 70%). A useful guide is to exercise at a pace where you can carry on a conversation without gasping for air. Resistance training is usually prescribed so that you're lifting a certain proportion of the maximum weight you're able to lift. It's recommended to do 8–12 repetitions (or "reps") of lifting at a comfortable weight for 2 or 3 sets. Make sure to rest for a minute or so between sets.

Time. How long should you exercise for? Generally, it's recommended that aerobic exercise be performed for at least 20 minutes, and resistance training for 35–40 minutes (including rest periods between sets).

Type. What kind of exercise should you do? Your choice will depend on which benefits you're after. Choose an

AS THE COURSE OF HIV INFECTION continues to change due to medical advancements, many people with HIV/AIDS (PHAs) in Canada and other developed countries are living longer, some with fluctuating periods of wellness and illness. As PHAs live longer, they may be dealing with health-related consequences of the disease and unwanted side effects of long-term HIV treatment, along with the general effects of aging.

Exercise may help to address these issues and improve the overall health and well-being of PHAs. While the benefits of exercise in the general population are well established, little research has investigated the effect of exercise on PHAs. The few small studies that have been done show that aerobic exercise, resistance training or a combination of both is safe and may be beneficial for PHAs who are medically stable.

Aerobic exercise, otherwise known as **cardiovascular** ("cardio") or **endurance training**, works the cardiovascular system (heart and lungs) by raising the heart rate and strengthening the heart. It involves doing a physical activity at low-to-moderate intensity for an extended time. Aerobic exercise helps improve your endurance so you can do an activity for longer without feeling tired as quickly. Examples include: brisk walking, jogging, aerobics, swimming, cycling, dancing and cross-training.

Resistance exercise, or **weight training**, strengthens muscles by contracting them against some sort of force. It can increase muscle mass,



activity you enjoy. Try mixing aerobic, resistance and flexibility exercises to maximize benefits and add some spice to your workout.

Don't start with a marathon—it's important to gradually build up to the recommended frequency, intensity and time that you exercise. As your physical fitness improves, you may want to slowly increase the intensity or duration of your workouts.

EXERCISE AND ...

The immune system. The limited research available has shown that exercise won't boost CD4 counts or lower viral loads, but it does not seem to harm the immune system or worsen virological status for PHAS who are medically stable. Most studies that have been done were for a short duration, so we don't know about the long-term effects of exercise on the immune system.

Weight and body composition. Although the effects of exercise on lipodystrophy are unclear, a combination of aerobic and resistance exercise may help reduce fat buildup in the belly. Resistance training (with or without aerobic exercise) can increase weight and body composition, such as lean body mass and the size of arms and thighs, which is good news for people with HIV-related wasting. If you're thinking of starting an exercise program, be sure to talk to your physician or other informed health care provider about safe parameters for aerobic exercise.

Strength. Resistance training (with or without aerobic exercise) can improve overall upper and lower body strength for PHAS.

Cardiovascular fitness. Aerobic exercise improves cardiovascular fitness and endurance for PHAS—the more



intense the workout, the greater the improvements in physical fitness. Although we would expect that exercise might help reduce the risk of heart disease (as it does in healthy, HIV-negative populations), it's still unclear whether it can help reduce high cholesterol and triglyceride levels in PHAS.

Bone problems. Bone problems are on the rise in PHAS. Although we're not sure why these problems occur, weight-bearing exercise is recommended as a way to increase bone strength and reduce the risk of fracture. If you have any type of bone disease, talk with your doctor before starting an exercise program.

Psychological health. Research shows that exercise can improve quality of life, reduce stress, enhance mood and life satisfaction, and lower symptoms of depression.

Anabolic agents. Sometimes people take anabolic agents (such as steroids, testosterone or human growth hormone) in combination with exercise to increase body weight. Some anabolic agents may cause liver toxicity and elevate fat (lipid) levels, so if you're taking them, have your doctor monitor you closely. Some studies have shown that anabolic steroids do not improve strength, weight and body composition any more than exercise alone does.

JUST DO IT!

It's important to gear any exercise program toward your physical capability and personal goals. It's a good idea to talk with your physician, physiotherapist or other informed health care provider to find out which program

Training Tips

When working out, don't forget to:

- Breathe.
- Wear comfortable clothing.
- Drink lots of water before, during and after you exercise.
- Include a warm-up and cool-down period as a component of your workout.
- Listen to your body.
- Eat a nutritious, well-balanced diet with adequate calories and protein to fuel your body.
- Give yourself a break, such as days off between workouts, to let your body recover.

might be right for you. If you want to join a gym, ask if they offer membership geared toward income or check out your local Y for various activities and programs. Many non-profit gyms and community centres with gyms, pools and exercise classes offer free access or reduced rates to PHAS, particularly those on disability. This often means that PHAS can get free exercise counseling and supervision.

You may want to track your activity in a log book, including dates you worked out, along with the frequency, intensity, time and type of exercise, and how you felt during and after. That way you can monitor your activity level and progress over time. Working out with a partner or group of people who encourage you along the way may help you stay motivated. Exercise doesn't have to be a burden. There are many ways to build physical activity into everyday activities. Take the stairs instead of the elevator or walk to and from a specific destination. By picking up your feet, you'll not only pick up your health but you'll lift your spirits, too. +

This article was written by physiotherapist Kelly O'Brien, in collaboration with Stephanie Nixon, physiotherapist at the University of Toronto's Department of Physical Therapy; Dr. Richard Glazier, scientist; and Anne-Marie Tynan, research coordinator at St. Michael's Hospital Centre for Research on Inner City Health.

See "Stairmaster to Heaven" in the March/April 2005 issue of BCPWA's *Living* + magazine for some PHA perspectives on exercise and fitness (www.bcpwa.org/pubs_living.php).

7 Reasons to Bust a Move

Exercise can lead to:

- more energy
- less stress
- an improved mental outlook
- improved heart capacity and lung function
- sound sleep
- more regular bowel function
- enhanced self-image and self-esteem