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Physical Activity, Exercise, and HIV [1]

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What Are Physical Activity and Exercise?

Physical activity is any activity that gets your body moving. It includes any activity that is part of your daily life ? from sweeping and cleaning to carrying groceries, gardening, walking, dancing, riding a bicycle, lifting weights at the gym, stocking shelves in a store, or playing soccer with friends.

Exercise is a type of physical activity. Exercise is activity that is planned and done on a regular basis (e.g., several times a week) for enjoyment or for improving any aspect of physical fitness ? strength, flexibility, or endurance. There are two main types of physical activity or exercise that the US Department of Health and Human Services (DHHS) recommends for adults: aerobic (cardiovascular or "cardio") and muscle-strengthening (resistance).

Labeling something a physical activity or an exercise is not nearly as important as understanding that the human body was designed to move, and stays healthier when it does. In other words, being active with your body ? whether it is through small amounts of activity throughout the day or scheduled blocks of time for more strenuous movement ? contributes to a longer, healthier life. Even small changes woven throughout the fabric of your normal life can greatly enhance your activity level and your health: taking the stairs instead of the elevator, carrying instead of wheeling groceries through the store, walking a short distance instead of driving the car.

It is important to know that neither expensive equipment nor complicated techniques are necessary in order for you to be physically active. Aerobic activity can be as simple as walking or cleaning your home with some added pep in your step. If it is unsafe or uncomfortable outside, try walking the stairs in your building or stepping up and down off the first step of a sturdy step-stool.

Muscle-strengthening activities can be simple, too. All it takes is your body and a floor ? for sit-ups, push-ups, or deep-knee bends. If you want to lift weights, try cans of food, jugs of water, or a spare brick. There are many ways to be safely physically active without spending a lot of money or going special places.

Benefits of Exercise and Being Physically Active

There are many ways in which physical activity can improve your health ? it can build and maintain muscle, increase your endurance, and strengthen your heart. In addition, there are many benefits of exercise that are especially helpful for people living with HIV (HIV+). Being physically active and having an exercise routine can:

- Increase muscle mass and prevent muscle loss. It is important to note that women rarely 'bulk up' or build large muscles without serious weight training regimens over long periods of time. Women's bodies have low levels of testosterone ? the hormone that can lead to bulky muscles. Also, many exercises can tone existing muscle without adding bulk.
- Reduce fat around the waist (for more information, see The Well Project's article, Lipodystrophy and Body Changes

[2])
- Lower total cholesterol and LDL (the "bad" cholesterol)
- Raise HDL (the "good" cholesterol)
- Lower triglycerides (a type of fat in the bloodstream)
- Help control blood sugars
- Reduce depression [3]
- Strengthen bones (help prevent bone disease [4])
- Strengthen the immune system [5]
- Improve sleep quality
- Reduce stress [6]
- Give you more energy throughout the day

There is also a connection between muscle mass and immune function. People who exercise often have higher CD4 counts [7] and fewer side effects [8] from HIV and HIV drugs.

Because powerful new HIV drugs are allowing many HIV+ people to live long, full lives, many of the medical problems facing people living with HIV now have more to do with diseases of aging than HIV-related illnesses. Being physically active is important in preventing aging-related health issues. In addition to the benefits listed above, there is strong evidence to suggest that being physically active lowers your risk for:

- Breast cancer
- Heart disease [9]
- Stroke
- High blood pressure
- Diabetes [10]
- Colon cancer

How Much and What Type of Physical Activity Do You Need for Health Benefits?

According to the DHHS, there are two types of physical activity that adults need each week to improve their health ? aerobic and muscle-strengthening activities.

Aerobic (Cardiovascular, "Cardio") Activity

Aerobic exercise uses oxygen to burn fat in your body. This is why people who are trying to lose weight often do a lot of aerobic exercise. It is also called cardiovascular exercise, because it raises your heart rate and makes your heart stronger. Besides burning fat, it can increase your endurance so that you do not get tired as quickly when you are active. Aerobic exercises can also lower cholesterol, triglycerides, and blood sugars.

Aerobic activity is often described in terms of its intensity, or how much effort it takes to do something. During moderate intensity activity, your breathing and heart rate become a bit higher and you will likely be a bit sweaty at the end. Another way to think of moderate intensity activity is any activity during which you can talk but not sing. During vigorous intensity activity, a person cannot say more than a few words without pausing for a breath, since vigorous effort causes your heart rate and breathing to increase substantially.

Examples of moderate aerobic activity include:

- Brisk walking (> three miles per hour, but not race walking)
- General gardening (e.g., weeding, raking leaves)
- Biking (< ten miles per hour)
- Water aerobics

Examples of vigorous aerobic activity include:

- Running, jogging, or race walking
- Swimming laps
- Jumping rope
- Aerobics (including dancing)
- Heavy gardening (e.g., digging holes, hoeing)
- Cross-country skiing

To see substantial health benefits, the DHHS recommends that adults need to do at least:

- 150 minutes (two hours and 30 minutes) of moderate intensity aerobic activity per week **OR**
- 75 minutes (one hour and 15 minutes) of vigorous intensity aerobic activity per week **OR**
- an equivalent combination of moderate and vigorous intensity aerobic activities

Aerobic activity should be done for at least ten minutes at a time; however, how you reach your total weekly goal is up to you. For example, if you aim for 150 minutes of moderate activity per week, you could do 30 minutes of activity five days a week or ten-minute periods of activity 15 times throughout your week.

It is important to ask your health care provider if you have any conditions that might make it a bad idea to do aerobic activity ? especially muscle wasting or very little body fat.

Muscle-Strengthening Activities

Muscle-strengthening activities, also called weight-bearing exercise or resistance training, involve moving or resisting the movement of weight with your muscles. For most people, it is normal to have mildly sore or tired muscles after weight or resistance training. This occurs because these activities actually cause very small muscle tears that take two or three days to heal. When the muscles heal, they heal stronger. Therefore it is important for you to wait two to three days after having exercised a part of the body before strengthening it again. This is usually the amount of time it takes for any soreness to go away.

For health benefits, the DHHS recommends that adults do muscle-strengthening activities at least two days a week at moderate to high levels of intensity. These activities should work all the major muscle groups, including the arms, legs, chest, back, and abdomen.

There are several types of muscle-strengthening activities:

- Exercises that use body weight as resistance (push-ups, sit-ups, deep-knee bends)
- Working with resistance bands
- Lifting weights

Muscle-strengthening exercise can be especially helpful for HIV+ women because it can help prevent both muscle and bone loss. If you have had muscle loss, weight-bearing exercise is probably good for you. However, if you have osteoporosis (bone disease [4]), weight-bearing exercise could be dangerous. It is important to ask your health care provider if weight-bearing exercise is good for you.

Other Types of Physical Activity

There are other types of exercise or movement that can improve your health as well. Activities that improve flexibility are important, especially as we age. Things like stretching and yoga can help prevent stiffness and increase the range of motion in joints. Flexibility exercises can help your joints, decrease back pain, increase the flow of blood and nutrients to the tissues, and decrease the likelihood that you will injury yourself doing other forms of exercise.

Yoga is a form of physical activity that combines movement with poses and attention to the breath. It can improve physical qualities such as strength, flexibility, balance, and endurance. It can also reduce stress, anxiety, and depression. Many community centers (i.e., YMCA) offer low-cost or free yoga classes.

T'ai chi is another activity that involves movement and attention to the breath. T'ai chi is a low-impact, self-paced system of gentle physical activity and stretching. It can reduce stress, improve balance, and promote calmness.

Tips for Starting A New Physical Activity Program

- Speak to your health care provider about what types of physical activity are best for you
- Record your weight and the measurements of your arms, legs, chest, stomach, and hips before starting your exercise program. If possible, also check your body composition (percent body fat and muscle) with a Bio-electrical Impedance Analysis (BIA). A BIA can be done by your health care provider or by a fitness trainer at the gym.
- Set realistic goals for yourself. Setting and achieving small, measurable goals is a good way to build toward larger goals.
- Find an exercise buddy. Becoming physically active with a friend can keep you motivated and less likely to skip workouts.
- Start slowly. Do what you can, but do not overdo it. Be patient with your body and your workout.
    - When starting aerobic activity, walk or jog at a pace where you can talk but are not out of breath. You may start out walking/jogging for ten minutes and slowly add five minutes to your work out until you are up to 30 minutes or more several times a week.
    - When starting muscle-strengthening activities, use slow, controlled movements. Lifting or dropping weights quickly can be dangerous and will not help build muscle.
- Stay hydrated! Remember to drink a lot of water before, during, and after your workout.
- Eat well! Good nutrition [11] is important to staying healthy and giving you the energy you need to be physically active. Wait two hours after a full meal before exercising.
- If you are able, try hiring or talking to a certified fitness trainer to help you develop a good program
- Do not exercise when you are feeling sick (feverish, vomiting, dizzy, diarrhea, etc.)

Being physically active requires commitment. It may take a while for you to reach your weekly goals, but do not give up! You and your health ? and those who depend on it ? are worth the time and effort it takes.

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Additional Resources

Select the links below for additional material related to HIV and exercise.
Exercise & HIV/AIDS (The Body) [28]
Exercise and HIV (The AIDS InfoNet) [29]
Health, Hope and HIV (Yoga Journal) [30]
The Keys to Exercise Success (American College of Sports Medicine) [31]
Physical Activity for Everyone (CDC) [32]
HIV InSite Exercise (UCSF) [33]
HIV and Exercise (Health24) [34]
Michelle Obama?s "Let?s Move!" [35]
Active at Any Size! (NIH) [36]
Exercise Guidelines Published for People with HIV over 50 (AIDSmeds) [37]

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[29] http://www.aidsinfonet.org/fact_sheets/view/802
[30] http://www.yogajournal.com/health/581
[31] http://www.myexerciseplan.com/assessment/
[32] http://www.cdc.gov/physicalactivity/everyone/guidelines/index.html
[33] http://hivinsite.ucsf.edu/InSite?page=pb-daily-exer
[34] http://www.health24.com/medical/Condition_centres/777-792-814-1760,22161.asp
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[36] http://win.niddk.nih.gov/publications/active.htm
[37] http://www.aidsmeds.com/articles/hiv_exercise_aging_1667_20989.shtml