

NCHPAD



**National Center on
Health, Physical Activity
and Disability**

*Get the Facts!
Get the Facts!
Get the Facts!*



Table of Contents

Letter from the Director	03
General Exercise Guidelines	04
Choosing a Fitness Center	10
Nutrition	15
NCHPAD's 14-Week Program	16
Champion's CRx	17



Letter from the Director

Dear Reader,

There are a number of barriers that inhibit physical activity in people with disabilities.

Walking outdoors, for example, is the single most common activity in the general population, but for many people with disabilities, it may not be an equally good option for promoting health and wellbeing because of certain functional limitations, safety concerns, and natural and built environmental barriers. Transportation issues, access to community fitness facilities and high unemployment/underemployment rates are additional barriers that may make it extremely difficult for people with physical, cognitive and sensory disabilities to lead active lives.

At the National Center on Health, Physical Activity and Disability (NCHPAD), we believe that everyone can benefit from regular physical activity. NCHPAD's mission is to encourage and support individuals with disabilities and chronic health conditions to become more physically active. Our central office, located at Lakeshore Foundation in Birmingham, Alabama, provides



Photo by Nik Layman and courtesy of Steve Wood, UAB Public Relations and Marketing

us with a tremendous talent pool of specialists in sports, recreation and fitness. ***Get the Facts*** will help you become more physically active or, if you are a service provider or family member, equip you with the knowledge to provide a more enriching physical activity program for your clients or loved one.

If you see anything in this booklet that piques your interest and that you would like more information

on, please do not hesitate to visit our website at www.nchpad.org or pick up the phone and call one of our information specialists at (800) 900-8086. We are here to serve you 24/7!

Sincerely,

James H. Rimmer, Ph.D.

Director, National Center on Health,
Physical Activity and Disability

GENERAL EXERCISE GUIDELINES

Exercise is for EVERY body

There are currently 56.7 million people with physical disabilities in the world. A striking 58 percent of those individuals are considered obese, leading to annual health care costs of approximately \$400 billion. However, these bleak statistics can be greatly diminished.

Exercise can play a leading role in improving and maintaining overall health. The Physical Activity Guidelines for Americans provide science-based guidance to help individuals with disabilities age six and older achieve healthy benefits through appropriate physical activity and exercise. These benefits are especially important for individuals with disabilities, as research shows they lead to less active lives than those without disabilities.

Comorbidities like high blood pressure, diabetes, and obesity are much more prevalent for individuals with disabilities, which makes physical activity even more important, as it can help prevent or lessen the impact of such comorbidities. In order to experience these and other benefits of regular physical activity, it must be incorporated into your daily routine.

Preliminary Steps to Exercise

1. Inform your physician or primary caregiver that you are considering starting an exercise program.
2. If possible, participate in a graded exercise test to determine your current level of fitness.
3. Find out the effects if any, of your medication on exercise.



4. If possible, consult a trained exercise professional for an individualized exercise prescription.

5. Determine your goals and make sure they are S.M.A.R.T.



S.M.A.R.T. goals stand for Specific, Measurable, Attainable, Relevant,

and Time Bound. For instance if you said your goal was to lose weight this would not be a SMART goal. If you lost one pound in the next year would you have reached your goal? A SMART goal would say: I want

Potential Benefits of Exercise

- Increased cardiac (heart) and pulmonary (lung) function
- Improved ability to perform activities of daily living
- Protection against development of chronic illnesses
- Decreased anxiety and depression as well as enhanced feeling of well-being
- Lowered cholesterol and blood pressure

to lose 10 pounds in two months. This way you would know when you have reached this goal in the appropriate amount of time and losing 10 pounds in two months is a realistic goal that is relevant to someone who is overweight.



General Safety Principles to Being Active

- Stop exercising if you experience pain, discomfort, nausea, dizziness, light-headedness, chest pain, irregular heartbeat, shortness of breath, or clammy hands.
- Drink plenty of fluids, especially water.
- Wear appropriate clothing, typically something that moves easily.
- Make sure your blood pressure and blood sugar levels are within appropriate limits before beginning.
- Find and follow an exercise program that meets your specific goals.



Pre-Exercise Considerations

Blood Pressure Numbers:

- 120/80: Normal Blood Pressure
- 120-139/ 80-89: Pre-Hypertensive
- 140-159/90-99: Stage 1 Hypertensive
- >160/ 100: Stage 2 Hypertensive

Check with your doctor before starting an exercise program if you are stage 2 hypertensive.

Blood Pressure (BP) is the measure of the blood's pressure upon the arterial walls and consists of two values: systolic BP (first number given), the pressure when the heart contracts and pumps blood, and diastolic BP (second number given), the pressure when the heart fills up with blood following a contraction. It is particularly important to know your BP before you exercise, as exercise will cause it to increase. As such, make sure you are not starting an exercise program with dangerously high BP numbers and, if possible, have a trained professional monitor your BP throughout the exercise session. In the long run, exercise will lower your blood pressure and can be very helpful in regulating BP numbers.

GENERAL EXERCISE GUIDELINES

Pre-Exercise Considerations

Blood Sugar Numbers:

Normal: 60-100

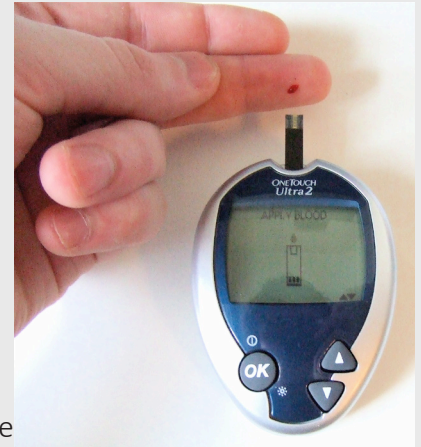
Low: Less than 70

High: Above 250 and ketones present

If you fall into the last two categories you should check with your doctor before exercising.

Blood Sugar, also known as blood glucose level, refers to the amount of glucose in the bloodstream and is very important for individuals who have diabetes. These numbers are important in relation to exercise because exercise can cause blood sugar to drop rapidly. This drop can result in hypoglycemia (low blood sugar), which should be avoided if possible. You should also avoid exercising when your blood sugar is dangerously high. Check with your doctor if either of these issues occur.

(ACSM exercise management for persons with chronic diseases and disabilities 3rd edition 2009)

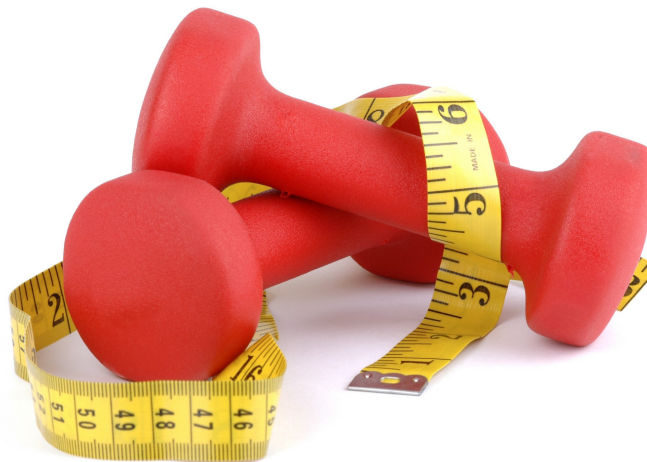


Common Exercise Terms

SETS: A completed round of a given number of repetitions, typically referring to just one exercise. You should always rest after you finish a set of exercises.

REPS: The number of times you should perform an exercise in a row. A typical routine might state, "Complete three sets of 10 reps." In this case, you would complete 10 reps of a given exercise, rest, and repeat two more times.

AEROBIC TRAINING: Any continuous, large muscle exercise that increases your heart rate. It works



your heart, lungs and circulatory system.

STRENGTH TRAINING: An exercise program that works your

body's musculature to increase overall strength and muscle tone. Sets and reps are commonly used to define the exercise regimen.

FLEXIBILITY TRAINING: Aimed at improving your range of motion in your joints, allowing you to perform more and greater movements.

BALANCE: Being able to keep your center of gravity above your base of support.

FUNCTIONAL TRAINING: Exercise moves that will help improve your activities of daily living.



BE FITT

When designing an exercise program it is important to always apply the FITT principle.

Frequency - how often various types of exercise should be performed. Aerobic exercises should be done most days of the week, while strength training exercises should be done two to three times per week.

Intensity - how hard an activity or exercise is. This could relate to the speed or incline involved in aerobic exercises, or the amount of weight used in strength training. Intensity can vary from very light to very hard. The next section will teach you how to monitor your exercise intensity.

Time - appropriate exercise duration. For aerobic exercises this is measured by time, while for strength training it is measured with sets and reps. An aerobic exercise could begin with a minimum goal of 20 minutes throughout the day and a longer-term goal of increasing duration to 60 minutes per day. This can be done in multiple 10-minute sessions or in one longer session. For strength training, you can start with as little as one set of 10 reps and work up to three sets of 15.

Type - or "mode," refers to the variety or kind of exercises you will perform. Structured examples include: walking, wheeling, running, cycling, swimming and resistance training. Unstructured examples include: gardening,

household cleaning, and walking or pushing to work.

When planning an exercise program and establishing goals, consider and incorporate each of these components.

BE FITT

F = 2-3 times/week

I = Moderate to vigorous

T = 30 mn a day/
150 mn/week

T = Any variation

GENERAL EXERCISE GUIDELINES

Determining Exercise Intensity:

1. **Heart Rate (HR):** Determine your HR by finding your pulse. Place a finger on the thumb side of the bottom of your forearm near your wrist or against the side of your neck and count your pulse beat for 10 seconds. Multiply this figure by six to calculate your HR per minute. You should never use your thumb to take your pulse as it has a pulse of its own.

2. **Maximum Heart Rate (MHR):** Subtract your age from 220 to determine your MHR. For example, a 40-year-old person would have an MHR of 180: $220 - 40 = 180$

3. **Target Heart Rate (THR):** Calculated at 60 and 80 percent of your MHR. For the range's lower cutoff point, multiply your MHR by 0.6. For the top cut-off point, multiply your MHR by 0.8. Based on the above example (MHR = 180), the THR range is 108 to 144 beats per minute. When doing cardio exercise, your goal should be to maintain this THR range. It is important to note that people with neurological conditions, high level spinal cord injuries, or those taking beta blockers may have alterations in their HRs; therefore, this method may be inaccurate for those individuals

4. **Ratings of Perceived Exertion (RPE):** Another method of measuring exercise intensity that may be more appropriate for those who cannot use the THR method. This is a scale of how hard you feel you are exercising. The Borg scale ranges from six to 20 with



six being no exertion and 20 full exertion. To use the scale, monitor how you feel while exercising, with a general goal of 12 to 13 RPE.

5. **Talk Test:** Another way to measure exercise intensity. If you can sing while performing cardio exercise you are not working hard enough. If you can talk while stopping occasionally to take deep breaths, that is good. If you cannot talk at all your intensity is too high.



READY TO BEGIN YOUR EXERCISE ROUTINE?

1. **Warm-up:** Engage in at least five minutes of light activity, such as walking or wheeling.
2. **Exercise:** This includes cardio exercise and strength training.
3. **Cool down:** Finish your workout with at least five minutes of a light activity that will bring your heart rate back down. This is also an optimal time to perform flexibility exercises.



SUGGESTIONS FOR EACH TYPE OF EXERCISE

Cardiovascular:

- Vary your workout each session.
- Be creative! Enhance your exercise routine by moving more throughout the day: during lunch, on coffee breaks, or around the house during commercials.
- Choose a pace that aligns with the intensity you want to achieve. Use the Borg scale or Talk Test to measure that intensity.
- Take deep breaths and “think tall” to maintain good posture.
- Examples of cardiovascular training include: cycling, walking, pushing and swimming.

Strength training:

- Perform each movement through a complete range of motion.
- Do not hold your breath while training. Instead try to exhale your breath while pushing the weight up or out and inhale while letting the weight down or in.
- If your goal is to increase muscular endurance, use lighter weights and perform eight to 12 repetitions for three to five sets.
- If your goal is to increase muscular strength, use heavier weights and perform five to eight repetitions for one to three sets.
- Types of strength training include weight machines, free weights, plastic tubing, and other equipment like kettle bells and medicine balls.

Flexibility and Functional training:

- The focus of flexibility/ functional training is to improve range of motion, balance, coordination and ability to carry out the regular activities of daily living.
- Flexibility training should be incorporated after every cardiovascular and strength workout.
- Hold stretches without bouncing. Gradually increase the amount of time you can hold them.
- Every major muscle group should be stretched, and more time should be spent on tight muscle groups.

CHOOSING A FITNESS CENTER



Making the right choice is always important; choosing a fitness center is no exception.

Fitness centers (sometimes called health clubs) range from upscale businesses to neighborhood gyms, with a range of options in between. How do you find the right one? First, determine your fitness goals. Consider scheduling a consultation with a health professional to help you decide what to work on and to receive a realistic assessment of your goals. Before you start using a fitness center, staff should offer you a health questionnaire to determine your risk factors and the most suitable activities to meet your needs and interests.

KEY FACTORS

Location: The general consensus is that the easier it is to get to a fitness center, the more often you will use it. Ideally, the facility should be near your home and/or workplace. You may want to locate a fitness facility that can be reached by an accessible means of public transportation.

Cost: Membership fees/dues vary. Generally, you will be asked to pay a fixed amount to join, and then a monthly fee. Ensure that

you understand exactly what is included in the fees often, such items as staff time, classes, pool use, child care, and even towels are extra.



If the facility uses a contract, read the fine print, as you would when

buying a car! Avoid signing up for a membership that extends beyond one year, as you can lose your money if the facility closes.

Do not be afraid to ask questions. For example, if the equipment or other parts of the facility are not accessible to you, ask the facility if it is possible to receive a discount on your membership fees/dues. Some facilities offer sliding fee scales based on your income. Other clubs offer family or joint memberships to couples, partners, or friends. Many fitness centers



waive membership fees at certain times of the year, such as the peak season (January), when all of the New Year's resolutions are made, or summertime, when many individuals decide to exercise outdoors

Hours: Many fitness centers open early and close late, and some are open 24 hours. However, others have limited hours. Operating hours must match your schedule; make sure to visit the facility during the time that you would most likely use it. Additionally, try to find out what the peak usage times for the facility are and if they overlap with your planned exercise times.

Equipment: There should be a variety of equipment, and it should be well-maintained. If you are looking for specific types of equipment, ask about them. It is also important to note the location of equipment; specifically, is it accessible to you?

Sometimes, having fewer pieces of equipment spread out provides the user the choice of getting on the equipment from the right or left side and allows for space to maneuver and place a mobility device.

Type: There are several varieties of fitness centers. Multi-purpose facilities generally include swimming pools, tennis/racquetball courts, and other amenities. Gyms tend to focus more on weight training and general fitness. Personal trainers may run studios offering one-on-one sessions. Other specialized facilities include Pilates, yoga, and martial arts. Determine which facility type will best help you meet your fitness goals.



CHOOSING A FITNESS CENTER



Classes: If you want specific fitness classes, does the center provide them? Are enough class sessions scheduled so you will not have to wait for months to get in? Does the fitness center offer anything in addition to basic classes, such as educational programs, special events, or workshops? For example, some fitness centers now offer book clubs or other social events that allow their members to get to know each other. These and other amenities, such as juice bars, spas, and on-site dry cleaners, may not be included in your membership fees and cost extra. Make a decision based on what is essential for achieving your fitness goals, not the available extras.

Staff: Find out how many staff members are likely to be on-site while you are there. If you expect one-on-one attention, request this initially. You should receive a group or personal orientation to all of the equipment at no charge when you join. Many facilities provide staff that walk the floors and are available to answer your questions while you work

out; however, other facilities charge personal training fees for detailed advice. These fees can range on average from \$25 to \$75 per hour. Trainers and instructors should be certified through a national organization, such as the American College of Sports Medicine (ACSM), American Council on Exercise (ACE), or the National Strength and Conditioning Association (NSCA). Some certifications, such as the Certified Inclusive Fitness Trainer (ACSM/NCHPAD CIFT) offered by ACSM and NCHPAD, require knowledge of specific disabilities and chronic health conditions as they relate to exercise in order to provide a comprehensive exercise program that is safe and effective.

Word of Mouth: If the fitness center has been recommended by someone you know, ask about his or her experiences. You may also wish to check





with your local Better Business Bureau to learn if complaints have been registered against the facility.

Accessibility: If you are looking for specific accessibility points be sure to take a tour. Is the building accessible? Are there accessible parking spaces near the

entrance? Is there an elevator? Are lockers, showers, and restrooms accessible? Does the pool have a lift that can be used independently? Is the staff knowledgeable in program design and adaptation? Is there cardiovascular equipment that can be operated by the upper body only? The best advice is to try out the facility for yourself and determine if it is right for you.

You can learn about many of the key factors listed above through a phone call or the Internet. However, before going any further, it's time for a visit. Most fitness centers will gladly offer you a tour if the facility declines, consider looking elsewhere.

When you visit the fitness center, take a good look around. You should feel comfortable with the people (both clients and staff), the place and the atmosphere.

Do the people seem friendly? Does anyone seem to react negatively to seeing someone with a disability? Does the facility appear to be clean, climate-controlled, and well-ventilated? Is there enough signage? Does the equipment look well-maintained? Try to schedule your tour at a time you would normally use the facility. How crowded is it? Is parking readily available, including accessible spaces? Are there ramps at entrances and exits? Are there clear paths to equipment?



ASK QUESTIONS

While you are asking yourself questions about how the facility feels to you, do not miss the opportunity to ask your tour guide and other staff members plenty of questions. Be polite, but persistent. This is your best chance to determine if this is the right facility for you. Questions may include:

- Does the facility provide orientation and instructions on how to use equipment?
- How old is the equipment and how often is it replaced?
- How often is equipment cleaned and maintained?
- Is there cardiovascular equipment that can be operated with the upper body only?
- Does the cardiovascular equipment, such as the stationary bikes, require a minimum speed to use?
- Are there showers and changing facilities? Is there a family changing area?
- Is the staff required to have a degree in exercise science or kinesiology?
- Is the staff required to pursue continuing education?
- What is the turnover rate of the staff?
- What are the busiest times for the facility? What areas are most crowded and when?
- What type of classes does the fitness center provide? Is there a limit on class size?
- Do instructors know how to adapt classes for your abilities?
- How much one-on-one staff interaction will be available?
- Are personal trainers, nutrition consultants, massage

CHOOSING A FITNESS CENTER



therapists, or other specialists available? Are they certified? What is the cost?

- How does the facility handle emergency situations? Has staff been trained in cardiopulmonary resuscitation and first aid? Does the facility have an Automated External Defibrillator (AED)?
- Can my personal assistant attend the facility with me without extra charges?
- Are service animals allowed in the facility?
- Can you reach the facility by public transportation?
- Are parking or child care available, and at what extra cost, if any?

Try It Out

Fitness centers should be willing to offer you a temporary pass for a small daily fee or at no cost. If you know a member of the facility, ask if he or she can get you a guest pass. Consider trying more than one fitness center to make sure you

pick the right one.

Do not succumb to a high-pressure sales pitch: think it over. Study the contract carefully. How long of a commitment is required: a year or more, or can you choose a month-to-month arrangement? Can you opt out if you decide it is not the right place for you, or if you move to a

different city? Do prices vary for peak and off-peak hours? Are there any finance charges or other fees? Do not sign anything you are not comfortable with.

IT'S UP TO YOU!

It's Up To You -After you do the research, visit facilities, and go through trial periods, it will be time to make your choice. The most important element of your decision is comfort. Do you truly feel comfortable with the fitness center, as well as its staff, clients, equipment, amenities, and policies? If so, take the plunge. If you find a good fitness center and stick with it, you have taken a key step toward meeting your personal fitness goals.



NUTRITION

Eating a healthy diet and maintaining a healthy weight are two very important components to living a healthy lifestyle.

Research has shown that when an individual's weight reaches a level categorized as overweight or obese, they are at an increased risk for developing the following conditions:

- Coronary heart disease
- Type 2 diabetes
- Certain types of cancers
- Hypertension (high blood pressure)
- High cholesterol
- Stroke
- Liver/gallbladder disease
- Sleep apnea/respiratory problems
- Osteoarthritis
- Gynecological problems

(Source: Centers for Disease Control and Prevention. What causes overweight and obesity? www.cdc.gov/obesity/adult/causes/index.html.)

The prevalence of obesity in the general population is between 17 and 22 percent. For individuals with a physical or intellectual impairment, the prevalence of obesity is estimated to be between 27 and 62 percent.

(Source: Mudge et al.: Living well with disability: needs, values and competing factors. *International Journal of Behavioral Nutrition and Physical Activity* 2013 10:100.)

The 2010 Dietary Guidelines for Americans were designed to encourage all Americans to eat more healthfully. The following strategies are to help build a healthier diet by focusing on key behaviors:

- Balancing Calories:
 - o Enjoy your food, but eat less
 - o Avoid oversized portions



- Foods to Increase
 - o Make half your plate fruits and vegetables
 - o Make at least half your grains whole grains
 - o Switch to fat-free or low-fat (1%) milk
- Foods to Reduce
 - o Compare sodium in foods like soup, bread, and frozen meals – and choose foods with lower numbers
 - o Drink water instead of sugary drinks

Credit: USDA's Center for Nutrition Policy and Promotion

Tips for overcoming barriers:

- Reduce portion sizes
- Plan meals ahead of time
- Ask for help with grocery shopping and cooking
- Use simple meal recipes
- Use adaptive tools and techniques in the kitchen to cook with greater ease and enjoyment

Looking for a fun, interactive new program to help you get moving and making healthy choices?

If so, check out...

NCHPAD's 14- Week Program to a Healthier You!

The National Center on Health, Physical Activity and Disability invites people with mobility limitations, chronic health conditions and physical disabilities to participate in this personalized, web-based program that can be done from home with little to no equipment.

This program offers 14 weeks of:

- New, personalized weekly exercises
- Physical activity and nutrition tips
- Motivational resources
- Weekly recipes
- Features to help you track your activity and what you eat
- Optional reminders and alerts
- Opportunities to connect with other participants
- Access to knowledgeable 14-Week coaches

Whether you are new to physical activity or already active, this program is designed for you!

Sign up at:

www.nchpad.org/14weeks/



3 Classes of Exercises

Class A:

Those able to use all four limbs to some degree. This may include individuals with limb loss or ambulatory CP.

Class B:

Those individuals that are able to use everything from the waist/chest and above. This includes individuals with paraplegia.

Class C:

Those individuals that have some, but not full, function in their upper extremities. This includes individuals with quadriplegia.



Scan here for a
Promo video

What is CRx:

An inclusive high intensity workout program!

We invite you to check out our FREE online daily workout program designed to challenge your clients or athletes regardless of their ability levels. CRx is a high intensity program for athletes of all kinds to develop speed, agility, power and endurance.

Mondays, Wednesdays, and Fridays concentrate on strength training, while Tuesdays and Thursdays are cardio-based. Athletes are also able to access previous days' workouts within the same week.

Each workout consists of exercises, complete with written descriptions and pictures. These high intensity workouts are great for competitive athletes playing sports like rugby and wheelchair basketball, as well as recreational athletes. Athletes and instructors are also able to submit workouts to be added to the CRx program.

Check it out at :
www.nchpad.org/CRx



For more information contact : Kelly at kellyb@lakeshore.org or crx@nchpad.org

Or check out our videos on the NCHPAD YouTube channel and search CRx Promo

