



The event will begin momentarily.

- This event is being recorded
- Captions are available by clicking the CC icon in the Zoom toolbar below
- ASL is provided
- Presentation materials are available at:
www.access-board.gov



Moving Forward: **Access to Inclusive Fitness Equipment**

July 14, 2021



Lex Gillette

Paralympian





Panel 1

Need for Inclusive Fitness Equipment

Kelly Bonner

National Center on Health, Physical Activity
and Disability (NCHPAD) / Lakeshore

Clark Rachfal

American Council for the Blind (ACB)



Kelly Bonner

Associate Director of NCHPAD

Certified Inclusive Fitness Trainer- ACSM

Certified Personal Trainer- ACE

Why Inclusion is Important



Equity

- Equal opportunities to participate
 - What the pandemic taught us
-



Inclusion Means



To transform communities based on social justice principles in which all community members:

- Are presumed competent
- Are recruited and welcome as valued members of their community
- Fully participate and learn with their peers
 - Experience reciprocal social relationships.

A group of people are in a gym or community center. In the foreground, a person is seated in a wheelchair, wearing a white shirt and a black headwrap. Behind them, several other people are standing and looking down at something in their hands. The room has large windows in the background showing green trees outside. A dark grey semi-transparent banner is overlaid on the bottom left of the image.

Current State of Health





Disability Impact

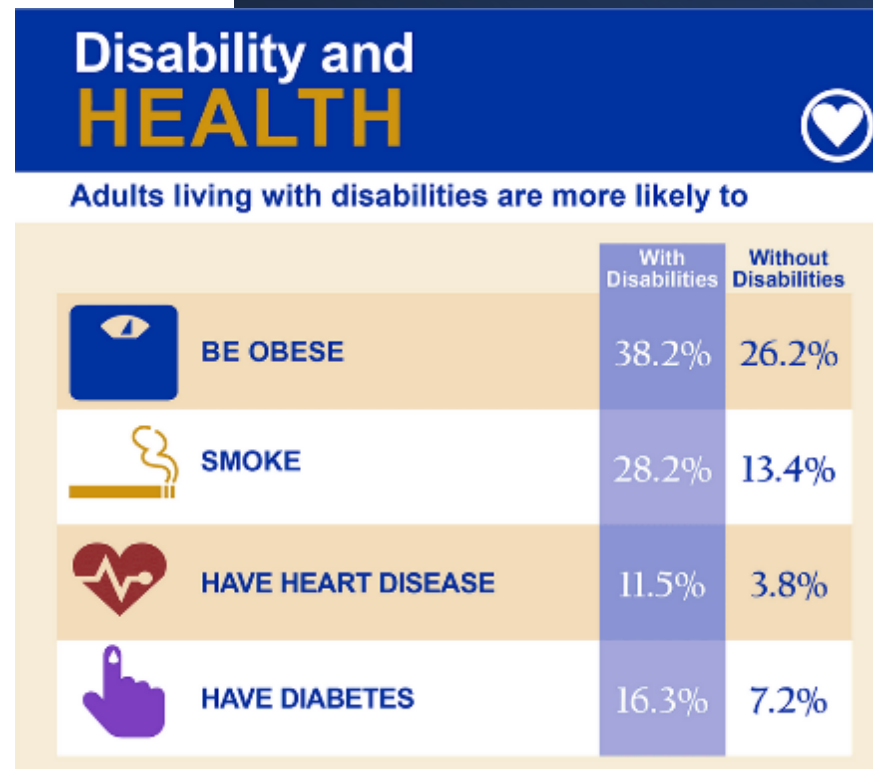
- Disability is especially common in older adults, women and minorities.
- 2 in 5 adults age 65 years and older have a disability
- 1 in 4 women have a disability.
- 2 in 5 non-Hispanic American Indians/ Alaska Natives have a disability.





Disability Impacts All of Us

- Adults with disabilities are **2-3 times more likely** to have heart disease, stroke, diabetes, or cancer than adults without disabilities
- **60%** of all adults with disabilities get **no aerobic physical activity**, an important health behavior to help avoid these chronic diseases
- **38% higher** obesity rates for youth with a disability
- Disability is a health disparity NOT a health outcome!

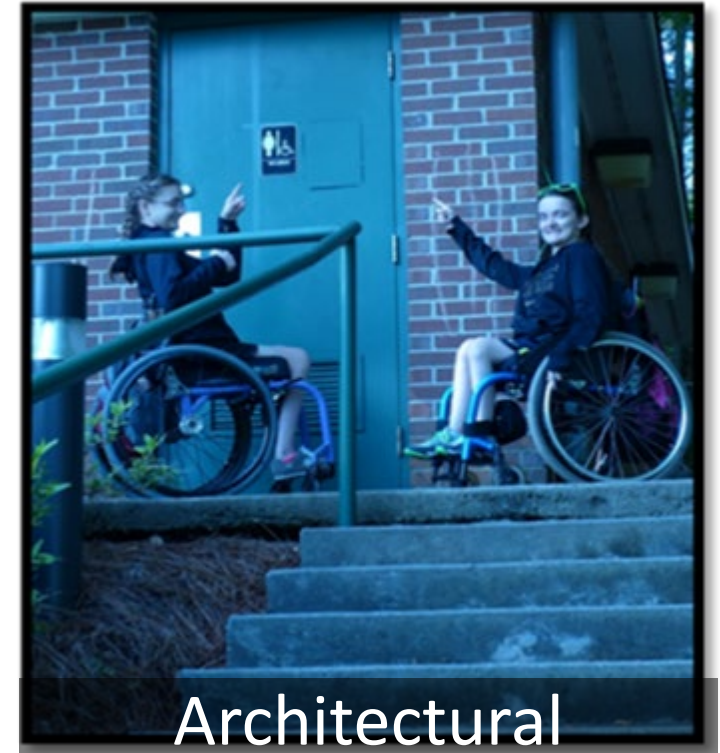
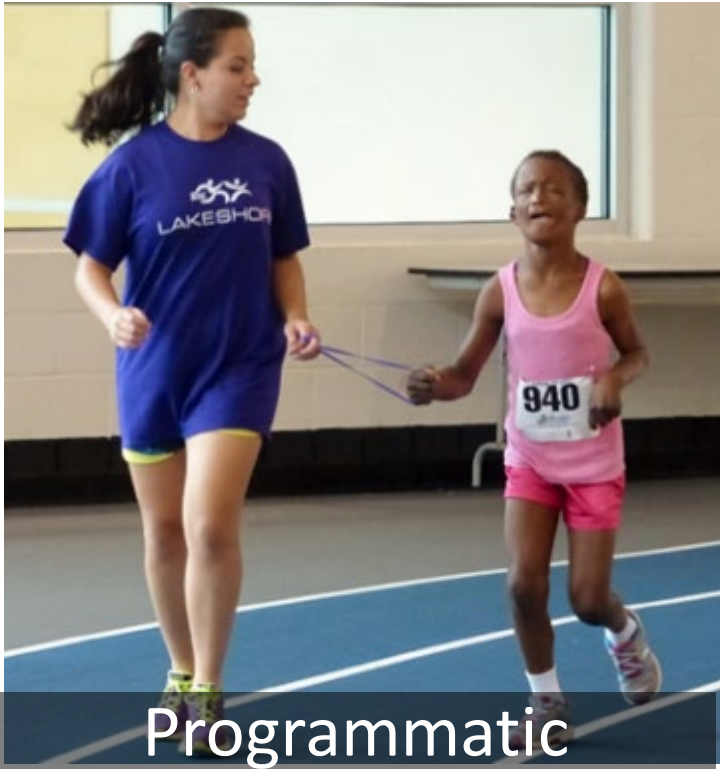




Health of People with Disability

- Poor health epidemic
- Inactivity and sedentary lifestyles
- Misconceptions and oversight
- Lack of health promotion
- Lack of information, training, and resources





Barriers to Physical Activity



National Center on Health, Physical Activity and Disability

- Founded in 1999, NCHPAD is a public health practice and resource center for information on physical activity, health promotion, and disability, serving persons with physical, sensory and cognitive disability across the lifespan.
- Funded National Center on Disability from the Centers for Disease Control and Prevention, National Center on Birth Defects and Developmental Disabilities (NCBDDDD)
- Operates within the UAB/Lakeshore Foundation Research Collaborative





| WWW.NCHPAD.COM

Staying Healthy and Active

at home



Exercising at Home

This playlist is packed full of exercises you can do from home.



Intro to Exercise

If you are new to exercising with a disability this video series is for you!



Mindful: A Meditation Series

Learn how to make mindfulness a part of your every day life and improve your mental health.



How To:

In this video series you can learn how to choose a chair, how to transfer, how to drive a car and more.



Nutrilab with Chef Joon

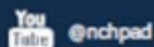
Follow along as Chef Joon prepares nutritious meals.



Inclusive Yoga

A full length inclusive yoga session.

For More Information | Go to www.nchpad.org



Resources

www.nchpad.org



Building Healthy Inclusive Communities

Discover Inclusive Events

A guide to creating access and inclusion at all events.

Disclaimer:

This toolkit does not ensure ADA compliance. To find standards required by law, please visit www.ada.gov or other similar documents such as: <https://adata.org/guide/planning-guide-making-temporary-events-accessible-people-disabilities>

NCHPAD
1800 900 8086
email@nchpad.org

Exercise From Home with Exercise Bands



Workout



For more exercise options, go to www.nchpad.org



GUIDELINES FOR DISABILITY INCLUSION IN PHYSICAL ACTIVITY, NUTRITION, & OBESITY PROGRAMS AND POLICIES

Implementation Manual

Online at www.centerondisability.org/docs/Guidelines_Disability_Inclusion_Implementation_Manual.pdf





FITNESS ASSESSMENTS FOR INDIVIDUALS WHO USE A WHEELCHAIR

Toolkit for the Fitness Professional



LIFE ON WHEELS

A GUIDE FOR A HEALTHY LIFE WITH A SPINAL CORD INJURY

Hosting Inclusive
Virtual Wellness

www.nchpad.com



Hosting Inclusive Virtual Wellness Activities

Overview

Here are some top tips to make sure your virtual wellness activity is accessible to everyone with or without a disability.

Be Considerate

- Plan ahead to make sure your course is appropriate and accessible for all.
- Consider the needs of individuals with a visual or hearing impairment as well as those with physical, intellectual or developmental disabilities.

Outline

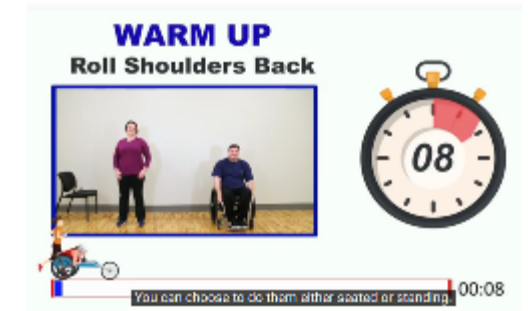
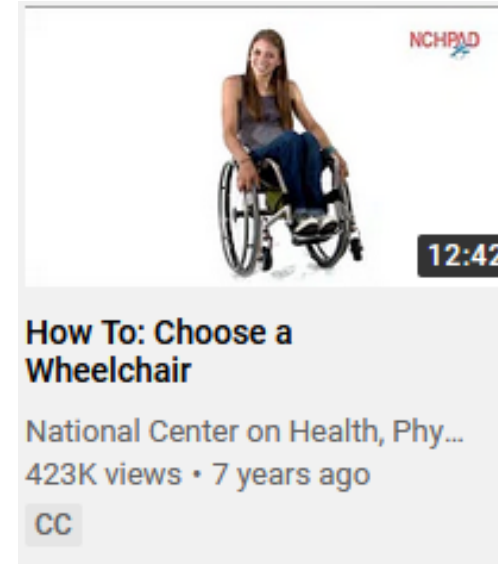
- Visual Environment
- Instruction
- Platform Accessibility
- Learning Process





YouTube

- Inclusive meditations
- Inclusive fitness
- How to video series
- Nutrition
- Intro to Exercise
- Much more





Clark Rachfal

Director of Advocacy and
Governmental Affairs

American Council of the
Blind (ACB)



QUESTIONS?

**You may type and submit
questions in the Q&A Area**



Panel 2:

Ongoing Inclusive Fitness Initiatives

Bill Botten

US Access Board

Dr. Stephanie Schnorbus Stephens

Beneficial Designs Inc. / RESNA – Inclusive Fitness

Richard Thesing

Mobility Fitness / ASTM

Dr. Elizabeth Barstow

Sangeetha Padalabalanarayanan

University of Alabama at Birmingham



Bill Botten
Training Coordinator
US Access Board



Americans with Disabilities
Act (ADA)

Architectural Barriers Act
(ABA)

Minimum Requirements

Types of Facilities Covered

**ADA – STATE AND LOCAL
GOVERNMENT
FACILITIES, PLACES OF
PUBLIC ACCOMMODATION,
COMMERCIAL FACILITIES**

**ABA – FEDERALLY
FUNDED FACILITIES**

- Health club, gym, fitness facility, training studio
- Employee fitness facilities
- Professional sports team training facilities
- Fitness facilities connected with a hotel/motel, resort, airport, spa
- Local recreation centers, YMCA
- Education facilities, colleges
- Outdoor fitness facilities

§236 - Exercise Machines and Equipment

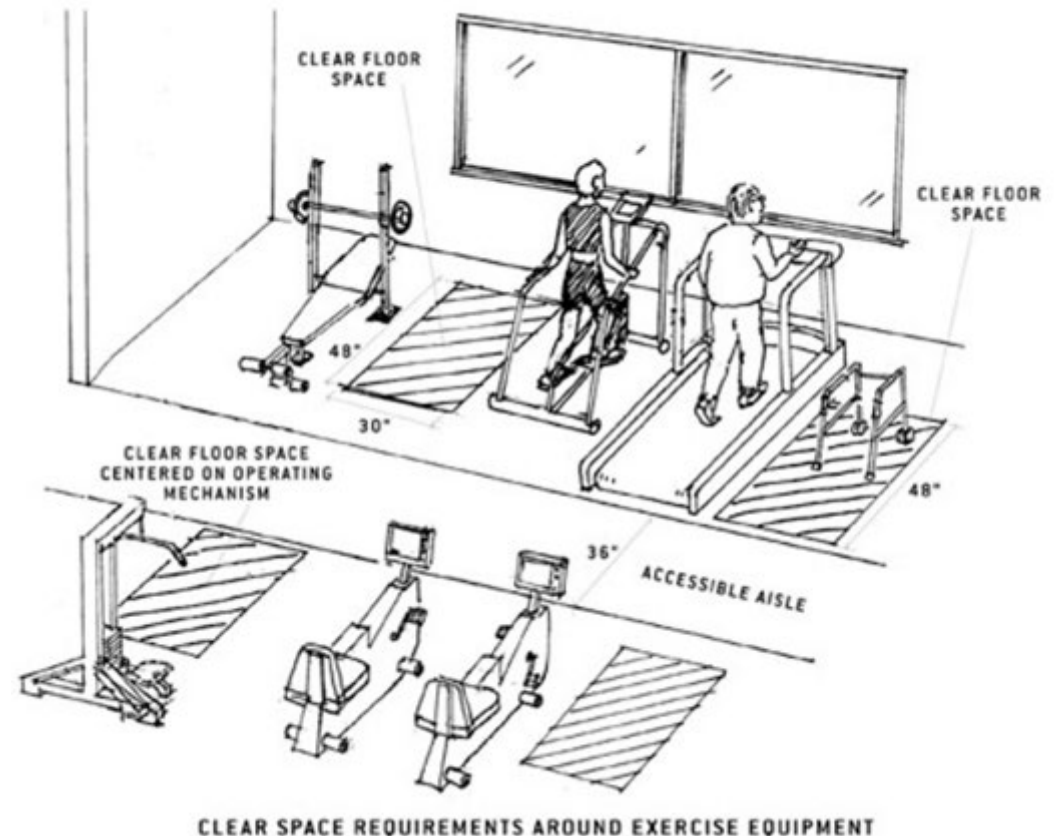


§236.1 General

At least one of each type of exercise machine and equipment shall comply with §1004.

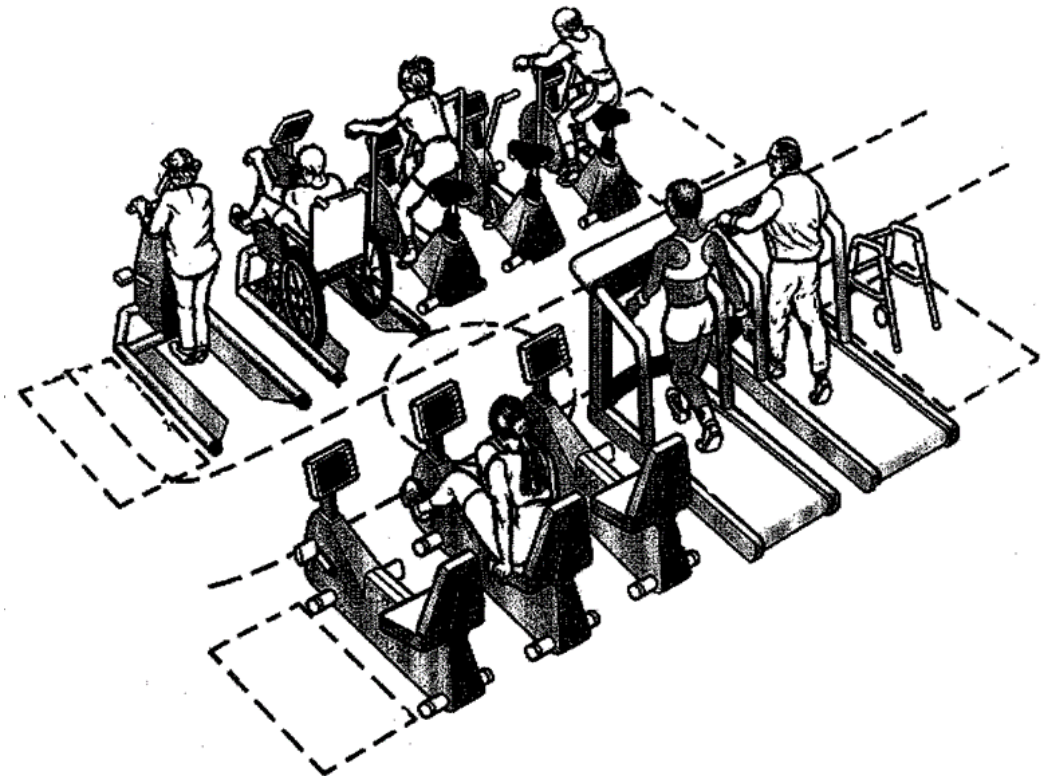
Advisory: Most strength training equipment and machines are considered different types. Where operators provide a biceps curl machine and cable-cross-over machine, both machines are required to meet the provisions in this section, even though an individual may be able to work on their biceps through both types of equipment.

Similarly, there are many types of cardiovascular exercise machines, such as stationary bicycles, rowing machines, stair climbers, and treadmills. Each machine provides a cardiovascular exercise and is considered a different type for purposes of these requirements.



Exercise Equipment and Machines

- 30" x 48" clear space and connecting accessible route
- Positioned for use by an individual using a mobility device
- Clear floor space or ground space for more than one piece of equipment can overlap



Operable Parts §205.1 (Exception 8)

Exercise machines and exercise equipment **shall not** be required to comply with requirements for operable parts (§309).



Further Information

U.S. Access Board

ta@access-board.gov

www.access-board.gov

(800) 872-2253 (voice)

(800) 993-2822 (TTY)





Moving Forward: Access to Inclusive
Fitness Equipment—

RESNA IF: Writing Standards for Fitness Facilities



Stephanie Schnorbus Stephens, Ph.D.

Beneficial Designs, Inc.

Minden, Nevada



Standards: Bridging the Gap

Created by balanced committees

Can be mandatory or voluntary

Translate requirements into practice

Provide instructions, objective specifications, and test methods

Can provide best practices

Help implement laws and mandates to improve access

Standards: Bridging the Gap (cont.)

ADA covers the built environment

But once parked and inside a public fitness facility,

What does a person with a disability have access to?



The Gap Illustrated

Can't negotiate safely
around or on/off
equipment

Give up?

Or risk injury?





The Gap Illustrated (cont.)

Staff and trainers experienced with disability

Inclusive programming

Inclusive environment

All almost nonexistent



Inclusive Fitness

Fitness in the Community

Specialized medical therapy settings

No family and friends

Travel burden

Under treatment/insurance

Inclusive fitness means fitness in the local community



Inclusive Fitness Momentum

2012, RESNA Standards Committee on Inclusive Fitness

Consolidate best practice to increase access for people of all abilities and the aging

Enable benchmarking, action planning, and progress monitoring of accessibility

Reframe the language of “access” to “universal design” and “inclusive”

Allow people with disabilities to identify centers meeting their needs



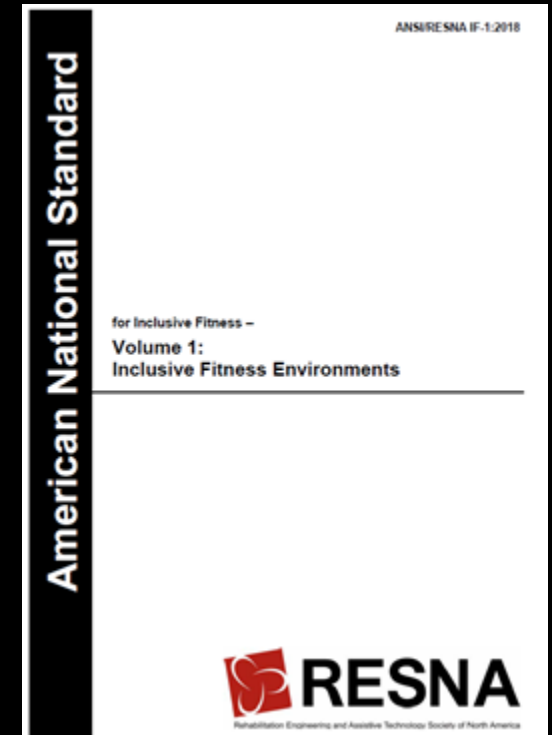
**So what does it mean
to be inclusive?**



RESNA IF-1:2021

Inclusive Fitness Environments Vol. 1

Section 1: Providing and Marketing Inclusive Fitness
Environments





RESNA IF-1:2021

Inclusive Fitness Environments

Section 2: Disclosure of Published Methods and
Requirements for Creating Inclusive Fitness
Environments and Implementing Inclusive Fitness
Practices

Policy

Equipment

Staff/trainers

Facility

Programming

Users/consumers



RESNA IF-1:2021

Inclusive Fitness Environments (cont.)

Section 3: Specifications, Test Methods, and Best Practices for Facility Accessibility

Includes fitness equipment scoping for existing and new facilities



Draft RESNA IF-1

Inclusive Fitness Environments

Section 4: Specifications for Training and Certification for
Working with People with Disabilities for Community-
Based Fitness Facility Staff

Trainers and staff

University curriculum



Draft RESNA IF-1

Inclusive Fitness Environments

Section 5: Guidelines for Disclosure of Information about
Adherence to Best Practices Related to Inclusive Fitness
Environments for Marketing Purposes

What do people need to know?

How do they want to get the information?

Users survey under development



Draft RESNA IF-1

Inclusive Fitness Environments (cont.)

Section 6: Policies

So new, the full title is still to be drafted

Best-practice policies

Benefits of hiring people with disabilities

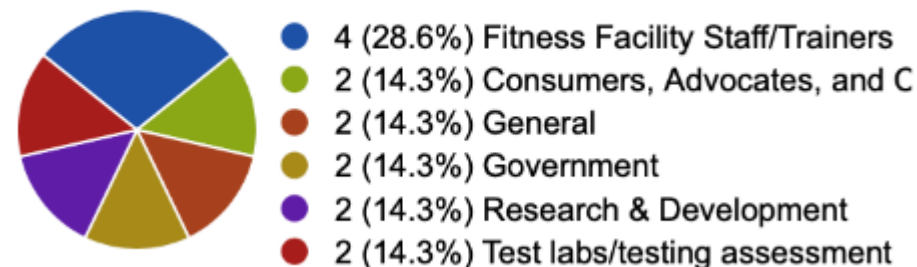


RESNA IF Experts Needed

Fitness equipment
manufacturers

Academic researchers

Interest Categories



Application and standards order form:

<https://www.resna.org/AT-Standards/Inclusive-Fitness-IF>

Email: stephanie@beneficialdesigns.com



Acknowledgements

The contents of this project were developed by RERC RecTech under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant numbers—H133E120005 and 90REGE0002). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, and you should not assume endorsement by the Federal government.



beneficial designs

designing beyond the norm to meet the needs of all people

www.beneficialdesigns.com

mail@beneficialdesigns.com

775 783 8822 voice

775 201 8850 fax





Mobility Fitness

— *Fitness for All* —



richard@mobilityfitness.org

<https://mobilityfitness.org>

Strength

ALL STRENGTH MACHINES HAVE A FIXED SEAT AND/OR THE HANDGRIPS ARE LOCATED SUCH THAT A PERSON MUST STAND TO REACH THE HANDGRIP. MANY PEOPLE IN A WHEELCHAIR CANNOT TRANSFER TO A FIXED SEAT AND NO PERSON IN A WHEELCHAIR CAN STAND TO REACH A HANDGRIP.



FreeMotion DUAL CABLE CROSS



The FreeMotion dual cable cross machine is the only strength machine that allows a user in a wheelchair to perform numerous exercises. It is widely used and has been in existence for over 20 years.

FreeMotion is currently upgrading the product to comply with the ASTM inclusive standards.

VR3 Total Access Chest Press

Key Features

Locking Plunger Adjustment



Adjustable Lever Arm



Upright Back Seat Support



Twist Select



- Locking Plunger Adjustment on swing away seat allows easy access for wheelchairs users and one-handed seat adjustment for users with limited mobility
- Adjustable Lever Arm enables a non-stressed start position for users with limited shoulder flexibility and wheelchairs users
- Upright Seat Back Support (10°) allows wheelchair users to maintain stability with heavier weights
- Integral 3-position Twist Select mechanism offers ease of weight selection from seated exercise position
- Top Mounted Exercise Pivot Position ensures correct biomechanical chest press movement from the hinged lever arm pivoting at the top
- Choice of Upper and Lower Handle Positions which caters for wheel-chair users, shorter users and those with balance problems
- Weight Stacks with Low Start Weights and 2.5kg Increments suitable for inexperienced and older users



SCIFIT STEPPER



A good example of a recumbent cardio machine where the arms move the legs, and the seat can be removed so that it can be operated from a wheelchair. Unfortunately, Life Fitness has no plans to add the ASTM audible features.

OCTANE RECUMBENT ELLIPTICAL



True Fitness recently purchased Octane. It plans to have the seat separated like the SCIFIT Stepper and add the audible feature to make the product ASTM compliant.

R3x-U Recumbent Cycle

- Provides an effective cardiovascular exercise
- Step-through design ensures easy access
- Low impact exercise
- Clear and central seat adjust, tactile seat number positioning
- Clear and easy to use tactile console control keys, program indicators, numbers & icons
- Fully supportive, highly visible pedals and straps.
- Raised tactile quick / adjustment keys



Key Features

Easy access control keys



Central seat adjustment



Clear easy to use console



High visibility foot pedals and straps



Total Access - Treadmill Model 750T IFI

- Multiple belt logos ensure that one logo is always completely visible at all times so that visually impaired and other users can recognize if the belt is moving
- Raised console iconography and color allows easy identification of the main controls both by color, large buttons and text for older users, plus raised iconography for visually impaired users
- Emergency kill cord switch provides safe emergency stop for users with limited upper limb function
- Running deck and belt color contrast. An important feature for users to be able to determine whether the belt is moving from the static side rails



Key Features

Multiple Belt Logos



Raised Console Iconography



Emergency Kill Cord Switch



Colour Contrasted Deck & Belt





UAB THE UNIVERSITY OF
ALABAMA AT BIRMINGHAM.

U.S Access Board

**Moving Forward: Access to Inclusive Fitness
Equipment**

Research to support the effort



Presenters



- Left- **Beth Barstow**
PhD, OTR/L, SCLV,
FAOTA
- Associate Professor,
Program Director
Graduate Certificate in
Low Vision Rehabilitation
- Occupational Therapy
Department UAB
- Right- **Sangeetha**
Padalabalanarayanan,
MS
- Program Director, RERC
RecTech, UAB/Lakeshore
Research Collaborative
- Secretary, RESNAIF
Committee

Table of contents

- 1. How research facilitated ASTM and RESNAIF process?**
- 2. Barriers and facilitators on using standards**
- 3. Mapping system to locate accessible physical activity resources in the community**
- 4. Evaluation tools**

Disclaimer:

The contents of these projects were developed by RERC RecTech under a grant from the National Institute on Disability, Independent Living, and Rehabilitation Research (NIDILRR grant numbers- H133E120005 and 90REGE0002). NIDILRR is a Center within the Administration for Community Living (ACL), Department of Health and Human Services (HHS). The contents of this presentation do not necessarily represent the policy of NIDILRR, ACL, HHS, & you should not assume endorsement by the Federal Government.



Previous Research

66

- Barstow, B. A., Vice, J., Bowman, S., Mehta, T., Kringen, S., Axelson, P., & Padalabalanarayanan, S. (2019). Examining perceptions of existing and newly created accessibility symbols. *Disability and Health Journal*, 12(2), 180-186.**
- Vice, J., Barstow, B. A., Bowman, S., Mehta, T., Kringen, S., Axelson, P., & Padalabalanarayanan, S. (2020) Effectiveness of the international symbol of access and inclusivity of other disability groups, *Disability and Health Journal*, 13, doi.org?10.1016/j.dhjo.2019.100836**



Current Project Aims

67

AIM 1- To determine the barriers and facilitators for producing accessible fitness equipment

What do product manufacturers perceive as the primary issues associated with manufacturing UD fitness equipment? Accessible fitness equipment is defined as products that meet the ASTM UDFE standards.

AIM 2- To determine the barriers to and facilitators for designing accessible public and private fitness facilities in the context of programming, services, and environments.

What do fitness facility personnel perceived as the primary issues associated with designing accessible fitness facilities. An accessible facility is defined as meeting the RESNA National Guidelines for Inclusive Fitness.

AIM 3- To assess the relative importance of criteria and "trade-offs" individuals with disabilities would make when prioritizing UD features in public and private fitness facilities.

Which UD features should manufacturers prioritize for adoption & how should they estimate the differences in priority weights of UD features between subgroups of individuals with disabilities.

AIM 4- To compare and contrast the perceptions of equipment manufacturers and fitness facility personnel to the priorities given by individuals with disabilities regarding UD features.

What driver diagram best describes the aggregate views of individuals, equipment manufacturers and fitness facility personnel for illustrating how UD principles can be applied to enhance accessibility of recreation and fitness facilities, programs, & services.

PHASE 1

68

- **We completed qualitative interviews of 8 national/international equipment manufacturers**
- **Perceived barriers and facilitators to manufacturing accessible fitness equipment.**
- **The results themed into 1) Challenges and 2) Tipping the scale.**



PHASE 2

- **Interviewed 6 fitness facility personnel**
- **Perceptions of universal design and accessible programming, equipment and space**
- **All 6 reported**
 - **Lack of funding to implement programming, train staff and purchase accessible equipment**

PHASE 3

- **Interviewed 8 individuals**
- **Perceptions of universal design and accessible programming, equipment and space**
- **Very preliminary findings indicate the type of accessible equipment desired and a strong preference for staff training. Many feel that an affordable trainer who is skilled in adapting physical activity, is the most important component of a gym membership**

Activity Inclusion Mapping System (AIMS)


71

- Early prototype-proof of concept
- Geotagged, crowdsourced mapping system to identify accessible and usable community-based resources
- Off-the-shelf open-source product
- Resources mapped for two counties in Alabama

AIMS- Features

72

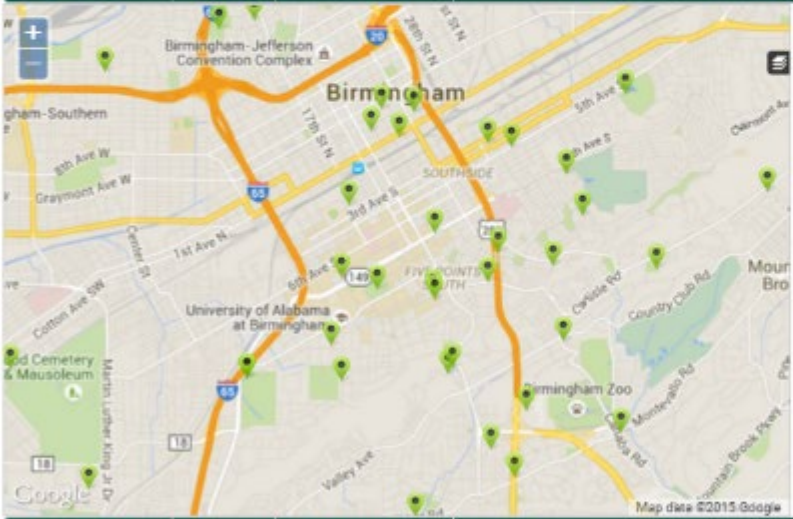
SEARCH


www.rectech.org

RESOURCES SUBMIT A NEW RESOURCE CONTACT US

Map

List Map 1 1-20 of 239 Resources



List Map 1 1-20 of 239 Resources

Filters

Resource Type

All Activities 239

Fitness Activities 53

Weightlifting 51

Weight Training 48

Personal Training 42

Fitness-Group Activities 25

Yoga 18

Relaxation 11

Yoga 17

Gymnastics 5

Location

Accessibility

Advanced Accessibility

Reset all filters

SEARCH

HOME SUBMIT A NEW RESOURCE GET ALERTS CONTACT US

POWERED BY THE Ushahidi PLATFORM

AIMS Features

73


rectech
www.rectech.org

RESOURCES SUBMIT A NEW RESOURCE CONTACT US


List Map

1


1-20 of 32 Resources




Riviera Fitness- Homewood
 amenities offered at Riviera Fitness: Women's Only Workout area Cardio Theater Group Fitness Room Spinning Room 1 on 1 Personal Training...
372 Palisades Blvd, Birmingham, AL 35209, USA 0.75mi




Lakeshore Foundation
 Lakeshore is a 501(c)3 non-profit organization which serves people with physical disabilities throughout Alabama, across the country and around...
4000 Ridgeway Dr, Birmingham, AL 35209, USA 1.08mi




OT D1 Birmingham**
 Sport training facility specializing in football.
1615 Independence Dr, Homewood, AL 35209, USA 1.36mi



YMCA-Shades Valley
 Video Tour: <https://www.youtube.com/watch?v=o6vgzVzZTeM> Established in 1884 the YMCA of Birmingham is a nonprofit dedicated to strengthening...
3551 Montgomery Hwy Birmingham AL, 35209 1.44mi



Mountain Brook YMCA
 Mountain Brook Y is a nonprofit organization dedicated to strengthening communities through youth development, healthy living and social responsibility.
2401 20th Pl S, Birmingham, AL 35223, USA 1.73mi

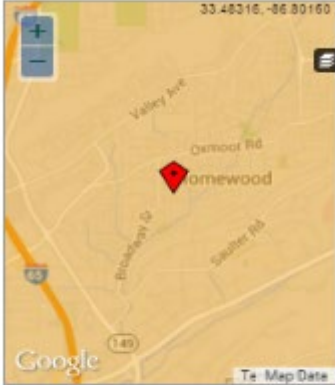


Planet Fitness- Vestavia

Filters

Resource Type

Location



10 mi

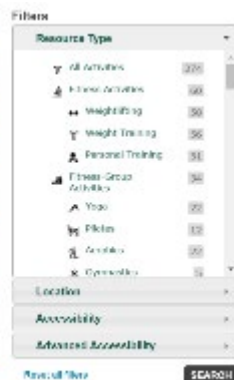
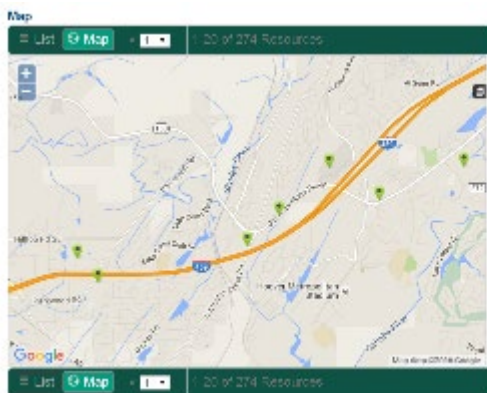
Birmingham, AL 35209, U

* If you can't find your location, please click on the map to pinpoint the correct location.

Accessibility

Advanced Accessibility

Accessible Camping



Filters

Resource Type

- Handcycling 1
- In-Line Skating 1
- Roller Skating 2
- Parks 35
- Wilderness/Adventure 10
- ☒ Camping 1
- Fishing 3
- Hiking 6
- Aviation 1
- Flight/Flight Training 1

Location

Accessibility

Advanced Accessibility

[Reset all filters](#)

SEARCH

Filters

Resource Type

Location

20 mi

35226

* If you can't find your location, please click on the map to pinpoint the correct location.

Accessibility

Advanced Accessibility

Filters

Resource Type

Location

Accessibility

Advanced Accessibility

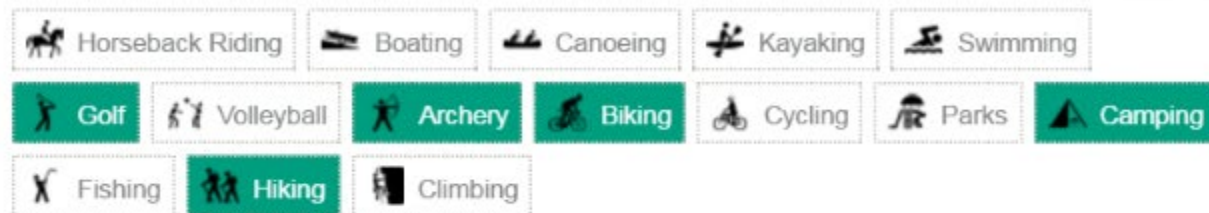
- ☒ Parking
- ☒ Paths
- ☐ Information Material in Accessible Format
- ☐ Reception Desk
- ☐ Restroom Entrance
- ☒ Restroom Stall
- ☐ Restroom Sinks
- ☐ Level Change
- ☐ Signage
- ☐ Locker Room/Shower
- ☐ Shower Stall
- ☐ Multiuse Trail
- ☐ Free Resource
- ☐ Free Activities

[Reset all filters](#)

SEARCH

Oak Mountain State Park

📍 200 Terrace Drive, Pelham, AL 35124, USA



■ Activities are reported to be wheelchair accessible

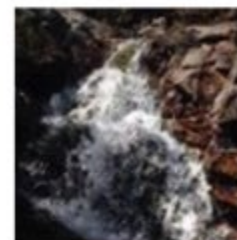
📞 205-620-2520 📖 Directions 🌐 www.alapark.com

🕒 Sunday: 7:00am - 8:00pm
Monday: 7:00am - 8:00pm
Tuesday: 7:00am - 8:00pm
Wednesday: 7:00am - 8:00pm
Thursday: 7:00am - 8:00pm
Friday: 7:00am - 8:00pm
Saturday: 7:00am - 8:00pm
«Less Information

💰
Adult Admission : \$4
Senior or Child Admission : \$1
Horse Ride : \$35-60
Golf (9 Holes, 18 Holes) on weekdays : \$17, \$23
Boat Rental : \$14-22 per hour
«Less Information



External Reviews



Oak Mountain State Park



25 Reviews



Please be aware that the pricing has gone up to \$5 per person, and they accept cash only. That being said, it's totally worth it. My boyfriend and I stopped... [Read More](#)

Additional Resources

Pelham Civic Complex

📍 500 Amphitheater Rd, Pelham, AL 35124, 1.78 mi

Walmart Superstore

📍 2181 Pelham Parkway, Pelham AL 35124, 2.17 mi

Oak Mountain Lanes

📍 300 Bowling Ln, Pelham, AL 35124, USA, 2.22 mi

YMCA and Shelby Baptist Physical Therapy -- Pelham

📍 2610 Pelham Pkwy, Pelham, AL 35124, USA, 2.3 mi

Anytime Fitness--Pelham

📍 2691 Pelham Pkwy, Pelham, AL 35124, USA, 2.42 mi

AIMS- Reviews based on accessibility

Oak Mountain State Park has grown to 9,940 acres making it Alabama's largest state park. With the largest land-area, one of the widest varieties of outdoor activities of any state park, and its proximity to Birmingham, Oak Mountain is a perfect stop while traveling to and from the state's largest city.

🕒 Last updated : Jul 24 2015

Accessible Features:

- ✓ Parking
- ✓ Paths
- ✓ Information Material in Accessible Format
- ✓ Restroom Stall
- ✓ Restroom Sinks
- ✓ Level Change
- ✓ Signage
- ✓ Free Activities

Show/Hide Detailed Accessibility Information

Comments

John (Apr 1 2016)

Mobility Aid Used if Any : Manual Wheelchair

| | |
|-------------------|---------|
| Built Environment | : ★★★★★ |
| Services | : ★★★☆☆ |
| Instruction | : ★☆☆☆☆ |
| Equipment | : ★★★★★ |
| Policy | : ★★★★★ |
| Overall | : ★★★★★ |

Wonderful park! So many activities for the family and me as well!



Contact Us

If any information needs to be corrected, please email us at email@rectech.org



Submit a Resource

Resource Name *

Resource Address *

Example: Corner of City Market, 5th Street & 4th Avenue, Johannesburg

1501 University Boulevard Birmingham, AL, United States

1501 Uab Drive South Birmingham, AL, United States

1501 U.S. 27 Summerville, GA, United States

1501 University Drive Northwest Huntsville, AL, United States

1501 US Highway 19 North Tarpon Springs, FL, United States

powered by Google

Categories *

☐ Fitness Activities

☐ Fitness-Group Activities

☐ Track & Field

☐ Equine

☐ Martial Arts/Self-Defense

☐ Water Activities

☐ Recreation

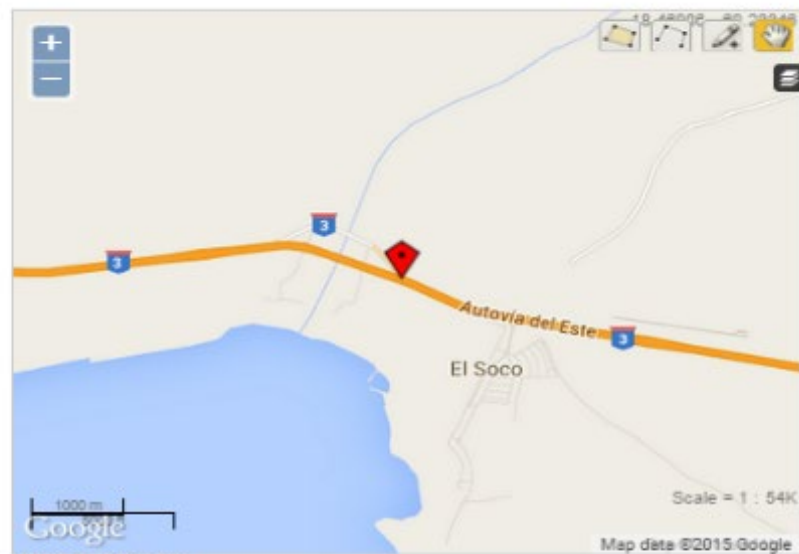
☐ Wilderness/Adventure

☐ Snow Activities

☐ Therapeutic

☐ Triathlon

☐ Educational



Upload Photos

No file chosen

AIMS Accessibility

Getting into the Building:

(Skip for parks or sites with no building) Observe the main entrance to the building. It may be necessary to walk/roll around the building to find the accessible entrance.

The entrance doorways have the following features (check all that apply): ?

- | | |
|---|--|
| <input type="checkbox"/> Door opening is at least 32 inches wide | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> Door threshold is flush with the ground or only slightly raised /less than or equal to 1/4 inch/ | |

The facility entrance has the following features (check all that apply): (Note: Assess the separate accessible entrance if there is no access at the main entrance) ?

- | | |
|---|--|
| <input type="checkbox"/> Power assist or automatic door | <input type="checkbox"/> Door handles operable with a closed fist without pinching or grasping or twisting the wrist |
| <input type="checkbox"/> Minimal force required to open door /less than or equal to 5lbs/ | <input type="checkbox"/> None of the above |

The stairs at the main entrance have the following features (check all that apply): ?

- | | |
|---|---|
| <input type="checkbox"/> Ramp /less than 5 degrees/ | <input type="checkbox"/> Signage available that directs individuals to an accessible entrance |
| <input type="checkbox"/> Separate accessible entrance | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> Platform Lift | <input type="checkbox"/> N/A no stairs at the main entrance |

Information:

Observe postings or any informational materials near the entrance to the building or in other common areas. It may be necessary to ask a staff person to see promotional materials, such as brochures.

Promotional materials for physical activity or nutrition education programs are offered in the following formats (check all that apply): ?

- | | |
|---|--|
| <input type="checkbox"/> Electronic version in plain text /ASCII/ including text descriptions of pictures | <input type="checkbox"/> Staff member available to interpret materials |
| <input type="checkbox"/> Large print /18 pt. font size or larger/ | <input type="checkbox"/> None of the above |
| | <input type="checkbox"/> No promotional materials |
| | <input type="checkbox"/> N/A no programs |

AIMS Usability

Horseback Riding:

Assess adaptations/options for an individual with an impairment/disability.

Horseback riding is offered:

Indoors ☐ Outdoors ☐ Both ☐

The following adaptations are available for horseback riding (check all that apply): ?

- | | |
|--|---|
| <input type="checkbox"/> Seated options to participate | <input type="checkbox"/> Adaptations for people with visual impairment |
| <input type="checkbox"/> Adaptations for poor grip strength such as straps/belts/or gloves | <input type="checkbox"/> Adaptations for people with lower extremity disability |
| <input type="checkbox"/> Adaptations for people with hearing impairment | <input type="checkbox"/> None of the above |

Horseback riding offers the following adaptations (check all that apply): ?

- | | |
|--|---|
| <input type="checkbox"/> Ramp for wheelchair users to mount horse/carriage | <input type="checkbox"/> Alternate horse commands |
| <input type="checkbox"/> Alternate seating for individuals with poor core strength | <input type="checkbox"/> None of the above |
| <input type="checkbox"/> Straps for feet and/or hands | <input type="checkbox"/> Other |
| <input type="checkbox"/> Hand controls for self-driving | |

In regards to level changes, entry ways, and other barriers, horseback riding is:

Wheelchair Accessible ☐ Not Wheelchair Accessible ☐

RecTech Current Cycle

Proof of product- RecTechmatch

Person-centered approach

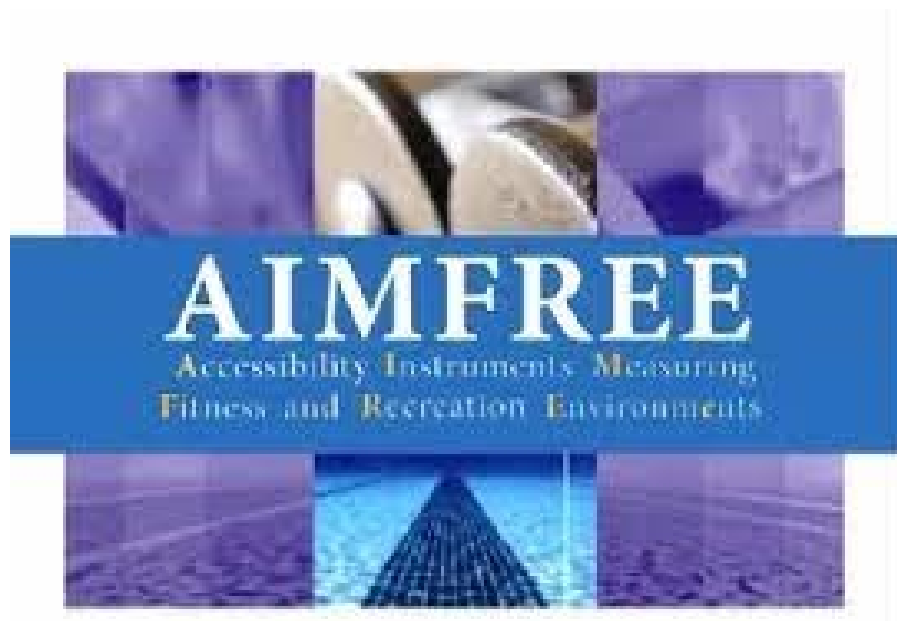
10 end users/5 trainers

- Interview takeaways
 - Home based exercising
 - Access to trainers

Product status:

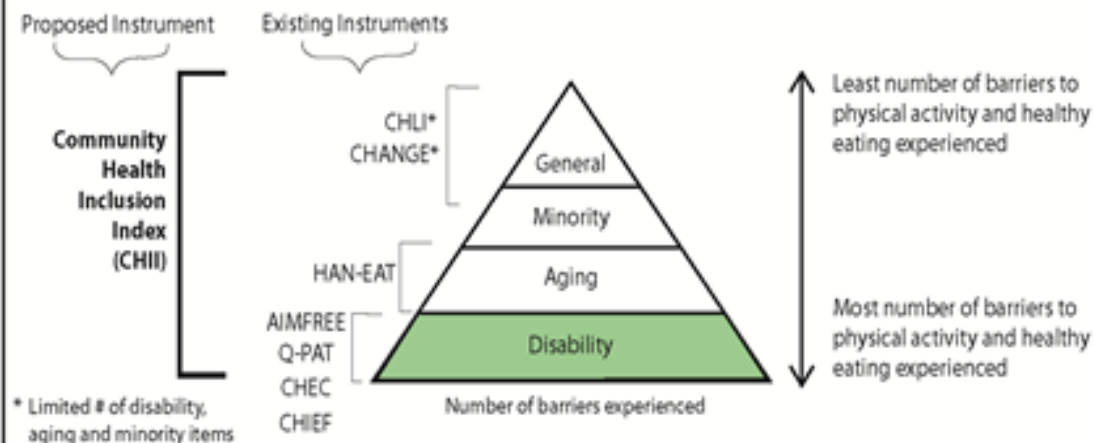
- Completion of renewed product
- Pilot testing
- Launched through NCHPAD website
- Include RESNAIF and ASTM certified facilities/products

Assessment Tools



A Universally-Designed Tool

Figure 1: Rationale for the design of a universal instrument that meets the needs of all populations



Existing Instruments: CHII-Community Healthy Living Index, CHANGE-Community Health and Group Evaluation, HAN-EAT-Healthy Aging Network Environmental Audit Tool, AIMFREE-Accessibility Instruments Measuring Fitness and Recreation Environments, Q-PAT-Quick Pathways Accessibility Tool, CHEC-The Community Health Environment Checklist, CHIEF-Craig Hospital Inventory of Environmental Factors.

2017 Apr;10(2):214-221.

doi: 10.1016/j.dhjo.2016.12.011. Epub 2016 Dec 30.

Fitness facilities still lack accessibility for people with disabilities

[James H Rimmer](#)¹, [Sangeetha Padalabalanarayanan](#)², [Laurie A Malone](#)³, [Tapan Mehta](#)⁴

Affiliations

•PMID: 28143707

•DOI: [10.1016/j.dhjo.2016.12.011](https://doi.org/10.1016/j.dhjo.2016.12.011)

Contact us



Barstow (205)934-7321; Padalabalanarayanan (205) 975-0550



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bbarstow@uab.edu ; Sangee@uab.edu



Website: <https://www.rectech.org>

UAB THE UNIVERSITY OF
ALABAMA AT BIRMINGHAM.

Thank you!



QUESTIONS for Panel 2?

**You may type and submit
questions in the Q&A Area**



Panel 3

Implementation of Inclusive Fitness Equipment

Gus LaZear

Ability 360

Catherine Carty

UFIT / UNESCO Chair for Inclusive Fitness

Jon Walker and Lloyd Reese

Playcore

Ileana Rodriguez

I Design Access, LLC

Gus LaZear



ABILITY360

SPORTS & FITNESS CENTER

UNIVERSAL FITNESS



Amenities

Memberships

Membership Classes

Recreation Therapy

Personal Training

Youth

Aquatic

Military

Seniors

Sports

Rentals



Ability360 Sports & Fitness Center Partners

- Ability360 Center Partners
- Rehabilitation Facilities
- Disability Organizations
- Universities
- Local Teams and other Sports Organizations
- K-12 Schools
- Military Organizations
- Community Organizations

Universal Fitness

Has to be your culture

Listen to your members and your community

There is not a one size fits all

Pilot programs

Do what you say you are going to do

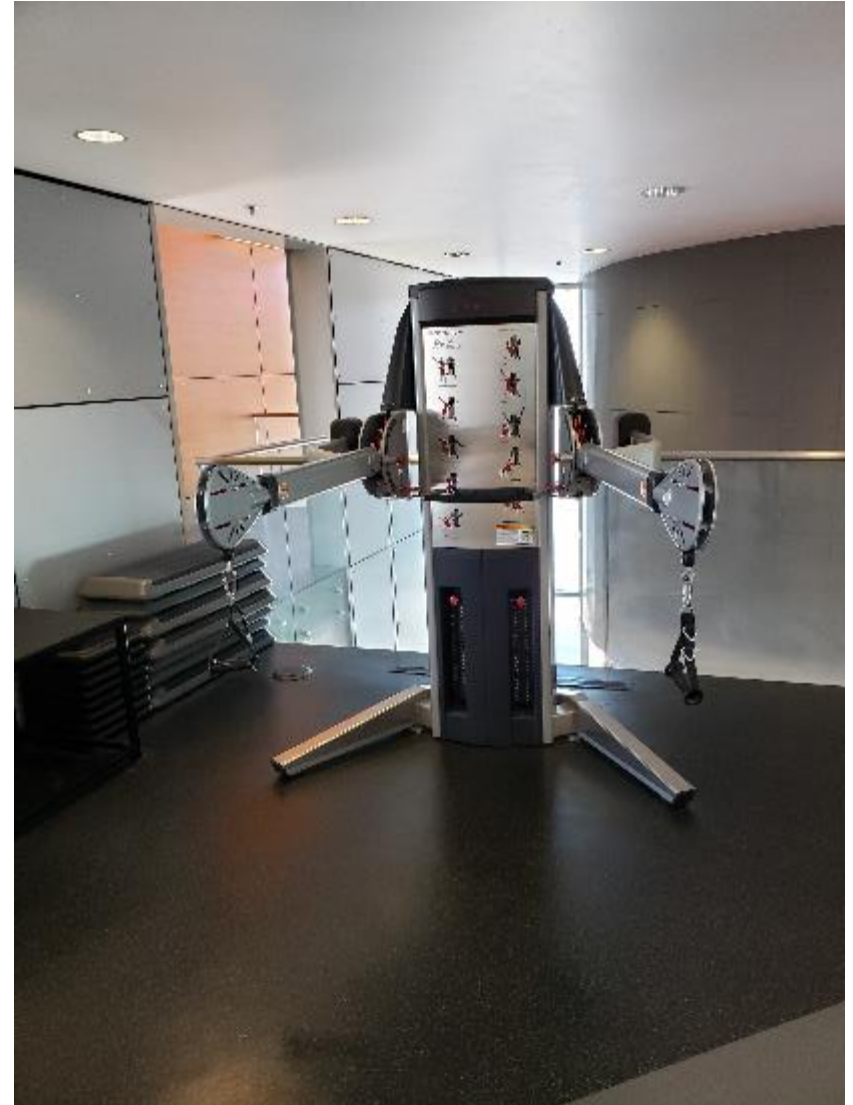
Maintain member trust



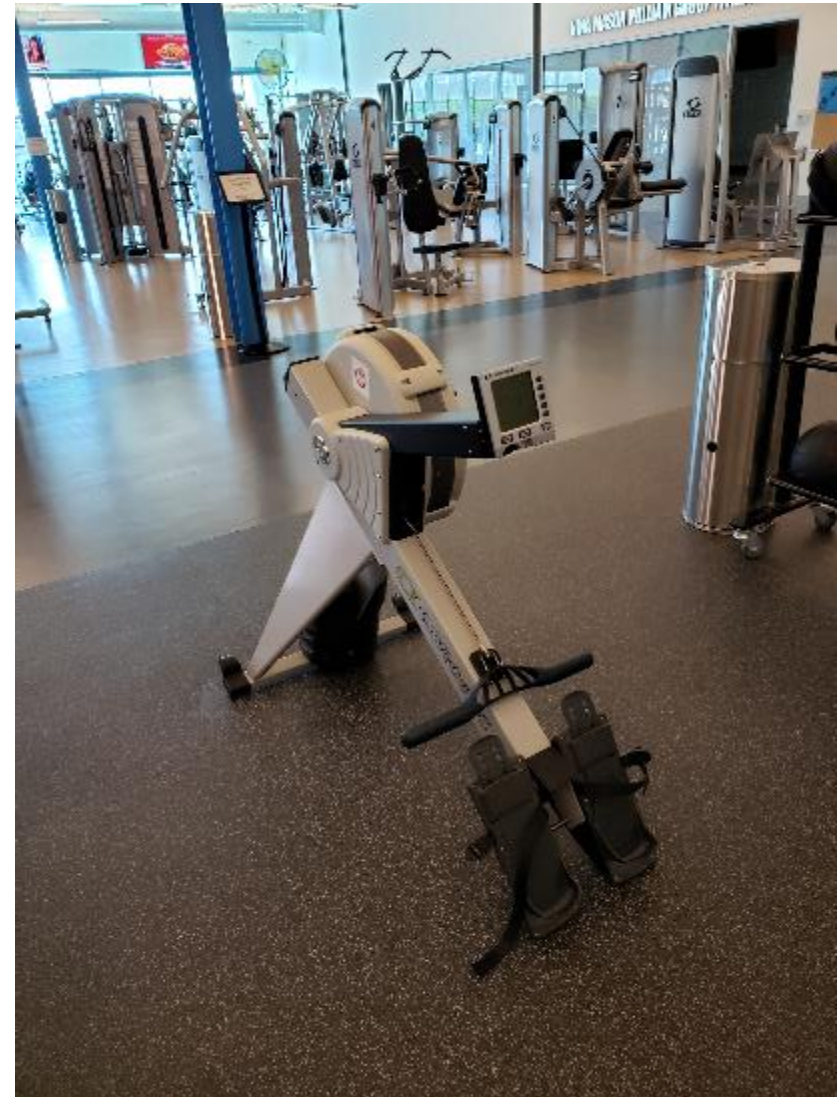
Equipment



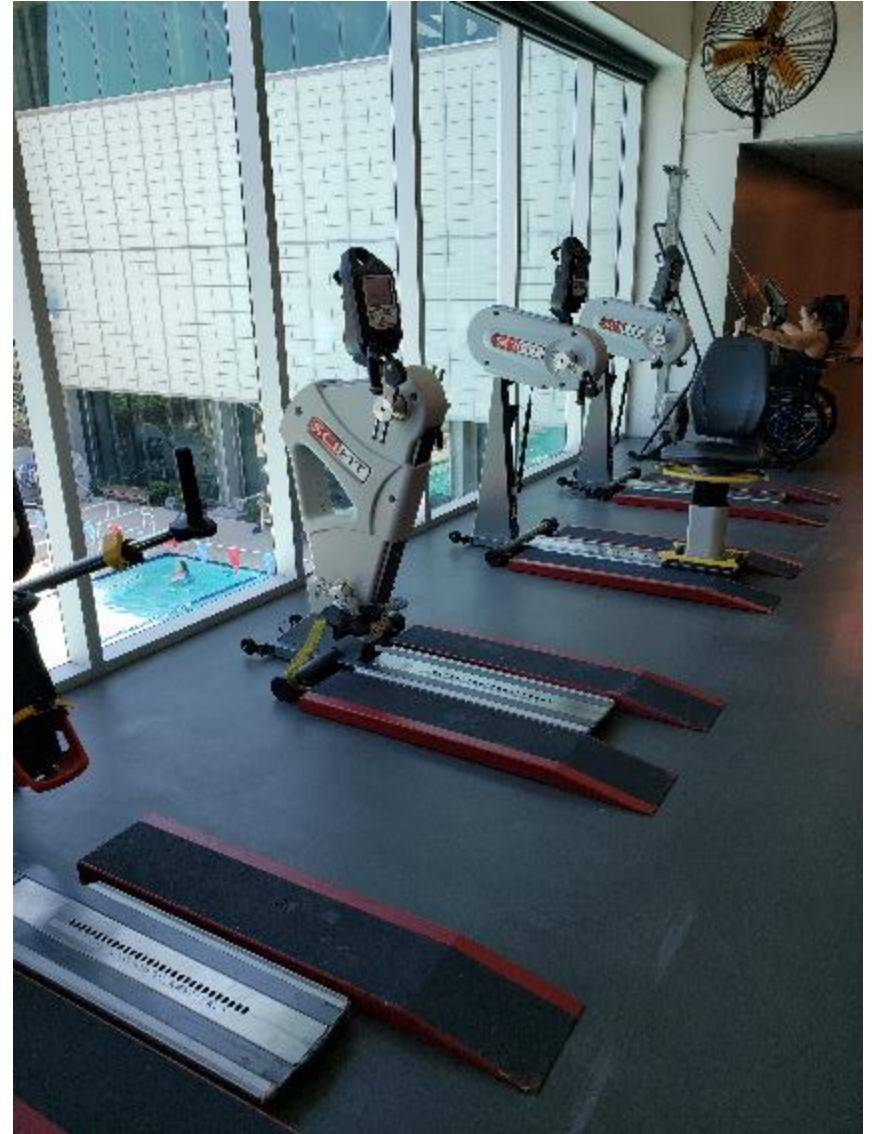
Equipment



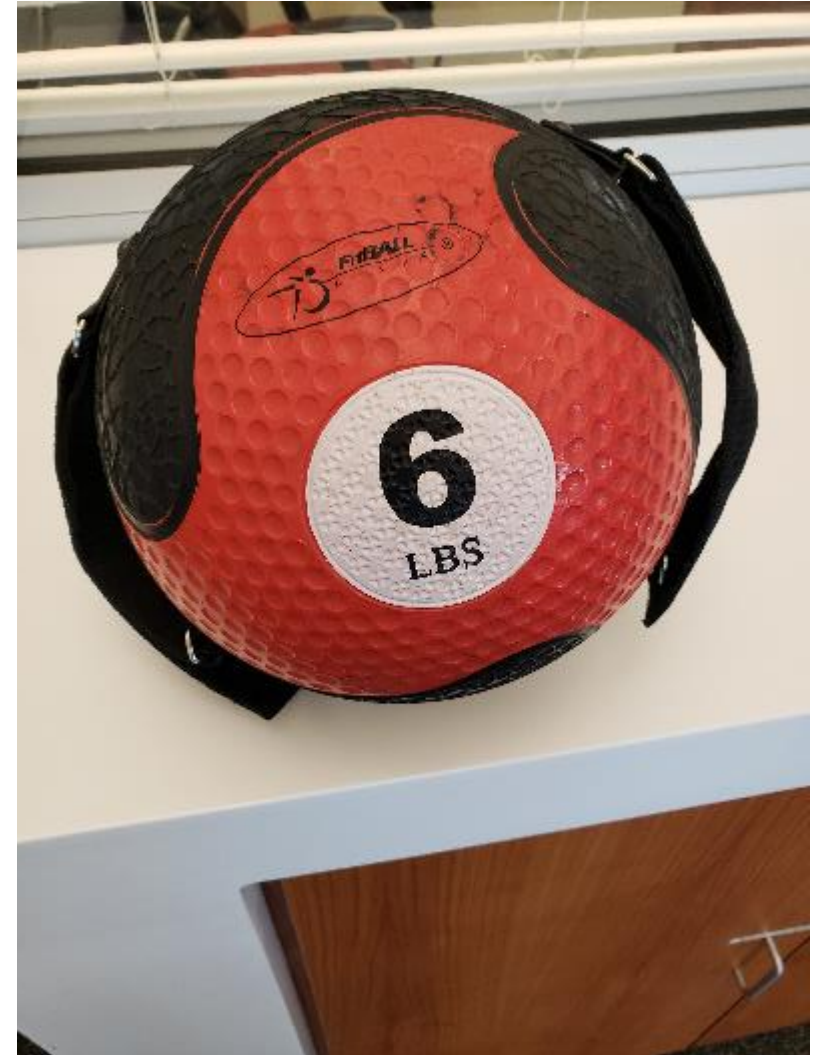
Equipment



Equipment



Equipment



Universal Fitness

- Starts with your culture
- Always educating
- Always learning
- Always listening
 - Members
 - Staff
 - Community

Gus LaZear – Vice President – Operations & Sports & Fitness

GUSL@ABILITY360.ORG







United Nations
Educational, Scientific and
Cultural Organization



• UNESCO Chair on Transforming
the Lives of People with Disabilities through
Physical Education Sport, Fitness and Recreation,
Munster Technological University, Ireland
•



UNESCO Chair Project Manager

US Access Board Inclusive Fitness Event July 14th 2021

CATHERINE
CARTY



Universal Fitness Innovation and Transformation

www.justdoUFIT.com

spinal injury

Supporting

93%

Women with disabilities are inactive at levels that promote health

It is significant that the **deconditioning and loss of function** experienced by persons with disability due to inactivity **impacts more on quality of life and health than the presenting disability**

Individuals with disabilities are
3 times less active
than persons without disabilities

Children with disabilities are
4.5 times less active
than their peers without disabilities

1

Lead from the top

2

Drive a global social change movement

3

Intrasectoral & multidisciplinary collaboration

4

Innovative capacity building program

5

Over 200 UFIT operators worldwide



fit

Fitness Sector



Global Impact

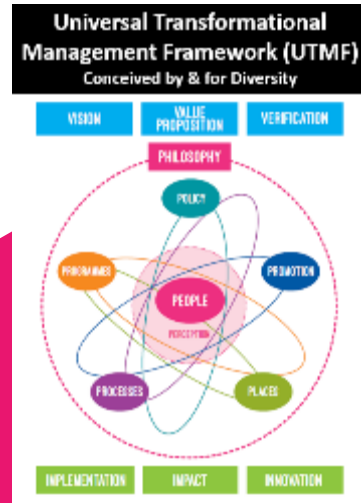


GUIDE FOR BUSINESS ON THE RIGHTS OF PERSONS WITH DISABILITIES

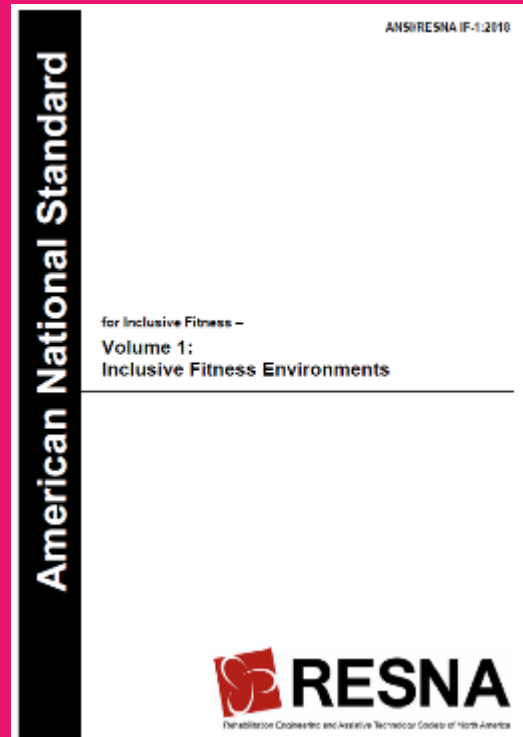
How business can respect and support the rights of persons with disabilities and benefit from inclusion



Sectoral Impact



Fitness Federations
Manufacturers
Register of Exercise Professionals
Fitness Training Providers
Fitness clubs
Disability service providers



UFIT Impact

"I am impacted on the way I view UFIT on a level of continuing to enrich the population I truly enjoy working with. I am impacted on the value of this program more now than when I took the training".

UFIT Fitness professional

Fitness Professionals

1. Increase of self-efficacy
2. They highly valued their knowledge acquired around ways to adapt exercises for people with disabilities & exercise planning and programming for people with disabilities.

Significant positive impact on staff morale, development and retention was cited.

UFIT Clubs

Clubs benefited from:

1. Professional education and lifelong training;
2. The development of inclusive policies;
3. Creation of inclusive fitness environments to democratise access to health and wellbeing to all citizens, including those with disabilities

The clubs find great value in the UFIT brand

UFIT Participants

Participants improved not only their physical wellbeing but also their social and emotional skills. The impact of this intervention went beyond the health clubs and fitness centres.

All participants named their trainers as a key component

Participants reported positively on their intention to continue working out at their fitness centre.



United Nations
Educational, Scientific and
Cultural Organization



- UNESCO Chair on Transforming
the Lives of People with Disabilities through
Physical Education Sport, Fitness and Recreation,
Munster Technological University, Ireland
-

Visit

www.justdoufit.com

<http://www.sportandhumanrights.unescoittralee.com/>

Contact:

catherine.carty@mtu.ie

CATHERINE CARTY





Jon Walker

Product Manager – Freestanding Play & Fitness

150 PlayCore Drive

Fort Payne, AL 35967

jon.walker@gametime.com



Lloyd Reese

VP Technical Product Management

544 Chestnut Street

Chattanooga, TN 37402

lloyd.reese@playcore.com



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“Accessible to and Usable by”



- Achieving “program access” is well beyond that of physical access
- Fitness spaces may meet the minimum standards, but users with disabilities may still have nothing to do and very little equipment to use
- Designing a fitness environment to be “accessible to and usable by” all persons with disabilities, may require going beyond the minimum

Development Partnership and Use Studies



- Worked with Development Partners:
 - Rick O'Rear - Recreation Division Manager at City of Chattanooga
 - Christopher Noel - Accessibility Coordinator at New York City Parks
- This led to:
 - An increased understanding of how to apply the data and metrics to function of the activity.
 - Discovery of the need for Universal Designs that allow people with or without disabilities to exercise together
 - Need for improved paths of travel and access for persons in a mobility device

Function and Requirements



- Implemented back support on Universally Designed products for the user's chair to rest against
- Added additional handhold variations to allow for additional muscle group engagement
- Raised Accessible Chin-Up Bar height to go beyond average reach range and allow for user's ability to achieve full arm extension

Adjustments to Existing



- Raised Accessible Chin-Up Bar height to go beyond average reach range and allow for user's ability to achieve full arm extension

Accessible Industry Standards



- Worked with Development Partners:
 - Christopher Noel - Accessibility Coordinator at New York City Parks
 - Mt. Sinai Hospital in NYC
- Available and Accessible to everyone
- Increase social engagement / promote friendships

Therapeutic Options



- Developed a grouping of products to focus on low impact and reach range activities
- Implemented soft and textured surfaces to assist with grip
- Designed an ergonomic comfort seat with additional support

Validation and Research



Dr. Michael Suk, M.D., J.D., MPH

Chairman of Orthopedic Surgery, Geisinger Health System, Danville, PA
Former White House Fellow-US Department of the Interior, Healthier US Initiative
Author of numerous scientific articles
Former Senior advisor to National Park Service



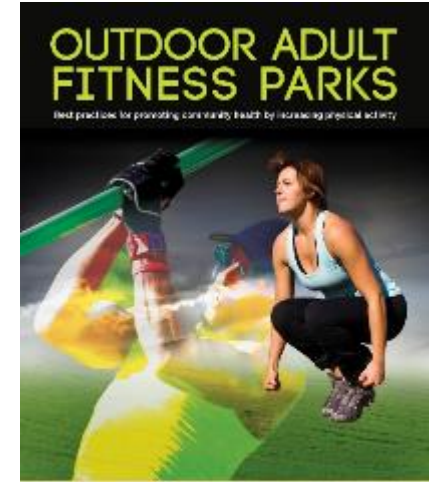
Dr. Gary Liguori, Ph.D.

Dean of the College of Health Sciences, University of Rhode Island
American Association of of Health and Disability Board Member
Scientific Advisory Board Chair-GOfit
Senior Editor first edition ACSM Guidelines for Exercise Testing and Prescription



Dr. Thom McKenzie, Ph.D.

Emeritus Professor of Exercise and Nutritional Sciences, San Diego State Univ.
Former Adjunct professor, Dept of Pediatrics, University of California, San Diego
Author of over over 200 published papers
Investigator on 14 multidisciplinary research projects-National Institute for Health



Universal Design



- Accessible equipment designs are usable and functional for persons with or without disabilities

Well Rounded Exercise Program

Core

Braces spine and improves efficiency of upper & lower body movement.
Promotes balance and stability.
Improves functional fitness and movement in everyday tasks

Balance

Reduce risk of falls, improves coordination, overall athletic skill, and posture. Promotes kinesthetic awareness. Increases all-over tone and control when moving body mass over a changing base of support.



Aerobic

Utilizes large muscle groups and increases heart rate. Engages heart, lungs, blood vessels, improving efficiency.



Muscle

Increases bone strength, boosts metabolic rate, slows or reverses age-related muscle loss. Has a beneficial effect on cognitive ability, insulin sensitivity, and depression.



Flexibility

Improves range of movement, joint motion, and posture. Relieves stress, improves feelings of well-being. Reduces post exercise soreness while improving physical performance.



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Equipment Benefits

EQUIPMENT MATRIX

Aerobic
 Muscle
 Core
 Balance
 Flexibility

| | | |
|--|---|---|
| Cardio Walker/Bike/Pedal Strengthens lower body muscles while promoting muscular endurance & cardiovascular endurance. • Abdominals • Hamstrings • Gluteus Maximus • Quadriceps | Cycle Strengthens lower body muscles while promoting muscular endurance & cardiovascular endurance. • Abdominals • Gluteus Maximus • Quadriceps • Hamstrings | Hand Cycle Strengthens upper body muscles. • Deltoids • Deltoidoids • Anterior Deltoid • Triceps |
| High Jump Strengthens lower body muscles, promotes muscular endurance & explosive power. • Quadriceps • Gluteus Maximus • Adductors • Hamstrings | Hurdles Strengthens lower body muscles, promotes muscular endurance & explosive power. • Quadriceps • Gluteus Maximus • Adductors • Hamstrings | Log Jump Strengthens lower body & core muscles while promoting muscular endurance & cardiovascular endurance. • Abdominals • Quadriceps • Gluteus Maximus • Hamstrings |
| Step Up Strengthens lower body muscles and core, while promoting muscular endurance, cardiovascular endurance, and balance. • Abdominals • Quadriceps • Gluteus Maximus • Hamstrings • Core | Bench Dips Strengthens upper body & core muscles while promoting muscular endurance. • Anterior Deltoid • Pectoralis Major • Adductors • Hamstrings | Leg Extension Strengthens lower body muscles & muscular endurance. • Quadriceps • Adductors • Hamstrings • Calves |

Indicates Primary Benefit

Aligning to Health Benefits and Total Body Fitness 23

| | | |
|--|---|--|
| Horizontal Chin-Up Strengthens upper & lower body muscles while promoting core strength, muscular endurance, & grip strength. • Abdominals • Anterior Deltoid • Biceps • Triceps • Latissimus Dorsi | Chest Press Strengthens upper body & core muscles while promoting muscular endurance & cardiovascular endurance. • Abdominals • Anterior Deltoid • Pectoralis Major • Triceps | Monkey Bars Strengthens upper body & back muscles. • Abdominals • Latissimus Dorsi • Biceps • Anterior Deltoid • Erector Spinae |
| Lat Pull Down Strengthens upper body & core muscles while promoting muscular endurance & grip strength. • Trapezius • Rhomboids • Posterior Deltoid • Anterior Deltoid • Latissimus Dorsi | Inverse or Climbing Wall Strengthens upper body & core muscles while promoting muscular endurance & grip strength. • Biceps • Anterior Deltoid • Triceps • Deltoidoids • Pectoralis Major • Abdominals | Parallel Bars Strengthens core muscles. • Abdominals • Hamstrings • Hip Flexors • Anterior Deltoid • Calves • Latissimus Dorsi |
| Leg Press Strengthens lower body muscles while promoting muscular endurance & cardiovascular endurance. • Adductors • Quadriceps • Gluteus Maximus • Hamstrings | Pull-Up Strengthens upper body & core muscles. • Abdominals • Hamstrings • Anterior Deltoid • Erector Spinae | Push-Up Strengthens upper body & core muscles. • Deltoid • Abdominals • Hamstrings • Pectoralis Major |








EQUIPMENT MATRIX

Aerobic
 Muscle
 Core
 Balance
 Flexibility

| | | |
|---|---|---|
| Roman Chair Squat Strengthens back, leg, & core muscles. • Abdominals • Erector Spinae • Gluteus Maximus • Hamstrings • Quadriceps | Swinging Rings Strengthens upper body & core muscles. • Abdominals • Anterior Deltoid • Erector Spinae • Biceps • Triceps • Latissimus Dorsi | Vertical Press Strengthens upper body & core muscles while promoting muscular endurance. • Triceps • Biceps • Anterior Deltoid • Posterior Deltoid |
| Vault Strengthens upper body & lower body muscles while promoting muscular endurance, cardiovascular endurance & explosive power. • Biceps • Abdominals • Quadriceps • Gluteus Maximus • Anterior Deltoid • Calves | Sit-Up Strengthens core & back muscles. • Abdominals • Obliques • Gluteus Maximus • Erector Spinae | Plyo Box Strengthens lower body & core muscles while promoting muscular endurance & cardiovascular endurance. • Trapezius • Abdominals • Quadriceps • Hamstrings • Gluteus Maximus • Erector Spinae • Calves |
| Captain's Chair Strengthens core & back muscles. • Abdominals • Hip Flexors • Obliques | Ninja Steps Strengthens lower body muscles & promotes muscular endurance. • Abdominals • Calves • Quadriceps • Hamstrings | Balance Board Strengthens lower body & core muscles while promoting balance development. • Abdominals • Erector Spinae • Gluteus Maximus • Quadriceps |

Indicates Primary Benefit

Aligning to Health Benefits and Total Body Fitness 25

| Stepping Pods  Strengthens lower body & core muscles while promoting balance development. • Abdominals • Quadriceps • Calves • Hamstrings | Balance Beam  Strengthens lower body & core muscles while promoting balance development. • Abdominals • Quadriceps • Calves • Hamstrings | Back Extension  Strengthens core & back muscles. • Abdominals • Obliques • Gluteus Maximus • Erector Spinae | | | | | | | | | | |
|--|---|--|---------------------------|---------------------|----------------------|--|-------------------------|---|---------------------|--|----------------|--|
| Skill Trainer  Promotes arm & core flexibility, while promoting upper body & core conditioning. • Trapezius • Abdominals • Rhomboids • Posterior Deltoid • Anterior Deltoid | Shoulder Rotator  Strengthens upper body muscles. • Biceps • Anterior Deltoid • Triceps • Abdominals | Functional Trainer  Promotes overall mobility & flexibility while promoting core & lower body muscle development. • Abdominals • Calves • Erector Spinae • Gluteus Maximus • Hamstrings | | | | | | | | | | |
| Knee Lift  Promotes flexibility & development of core & hip flexors. • Abdominals • Hip Flexors • Obliques | <table><thead><tr><th>ADDITIONAL CONSIDERATIONS</th><th>FEATURES & BENEFITS</th></tr></thead><tbody><tr><td>Socialization</td><td>Selecting equipment that offers solo use opportunities, increased opportunities for socialization, effective spacing and positioning of the equipment, on-site facilitator services, and engagement amongst users.</td></tr><tr><td>Universal Design</td><td>Consider equipment especially designed to promote accessibility and inclusion. Accessible routes of travel and storage will also require consideration for maximum usage.</td></tr><tr><td>Active Aging</td><td>Some equipment offers tailored enhancements, like hand holds and back supports, to provide additional support and stability for older, rehabilitative, or deconditioned users.</td></tr><tr><td>Quality</td><td>It is important to understand product specifications, manufacturer's warranty, and maintenance recommendations in order to ensure the product's longevity.</td></tr></tbody></table> | | ADDITIONAL CONSIDERATIONS | FEATURES & BENEFITS | Socialization | Selecting equipment that offers solo use opportunities, increased opportunities for socialization, effective spacing and positioning of the equipment, on-site facilitator services, and engagement amongst users. | Universal Design | Consider equipment especially designed to promote accessibility and inclusion. Accessible routes of travel and storage will also require consideration for maximum usage. | Active Aging | Some equipment offers tailored enhancements, like hand holds and back supports, to provide additional support and stability for older, rehabilitative, or deconditioned users. | Quality | It is important to understand product specifications, manufacturer's warranty, and maintenance recommendations in order to ensure the product's longevity. |
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| Quality | It is important to understand product specifications, manufacturer's warranty, and maintenance recommendations in order to ensure the product's longevity. | | | | | | | | | | | |

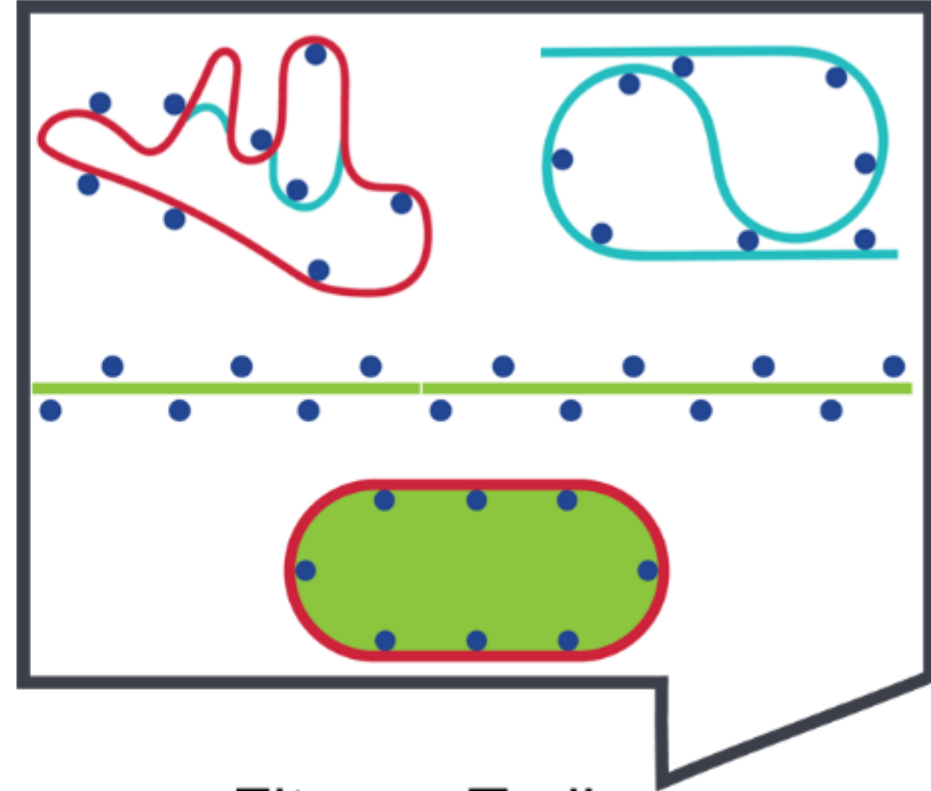


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Space Typologies

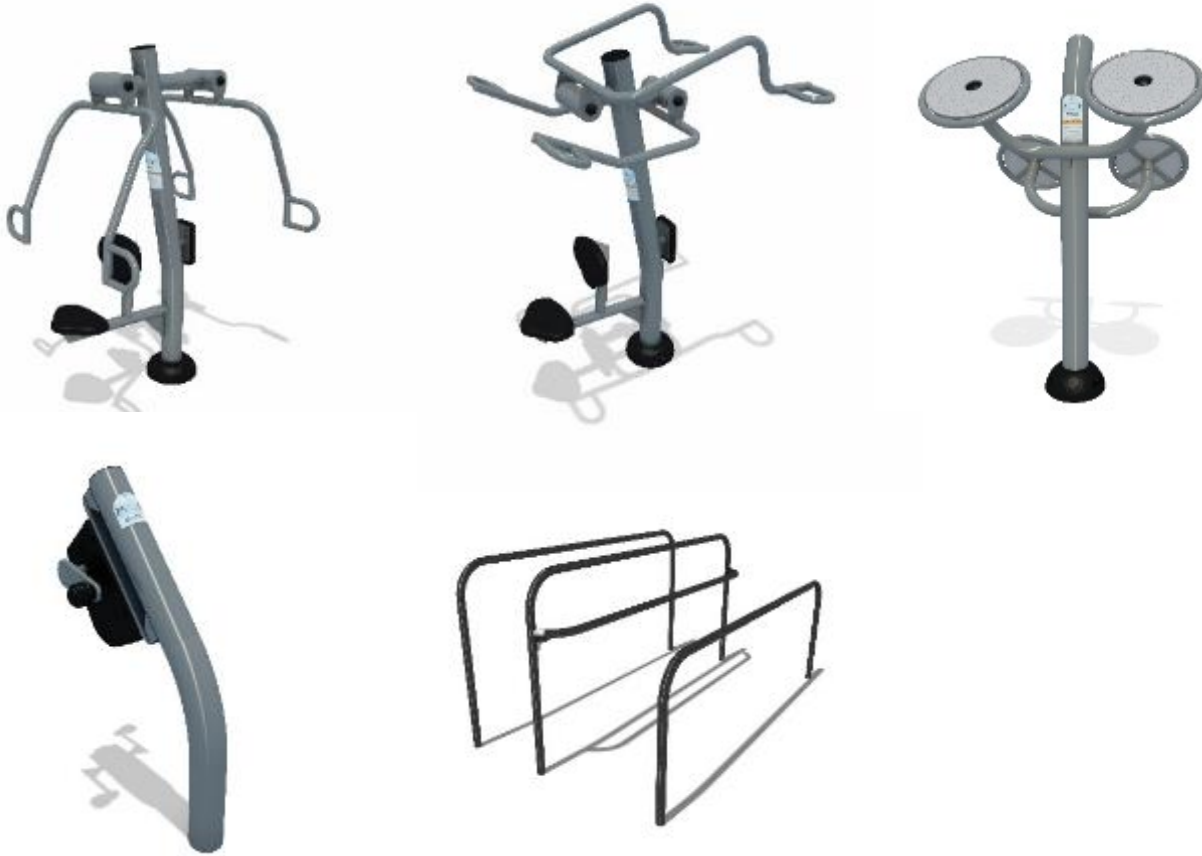


Fitness Cluster



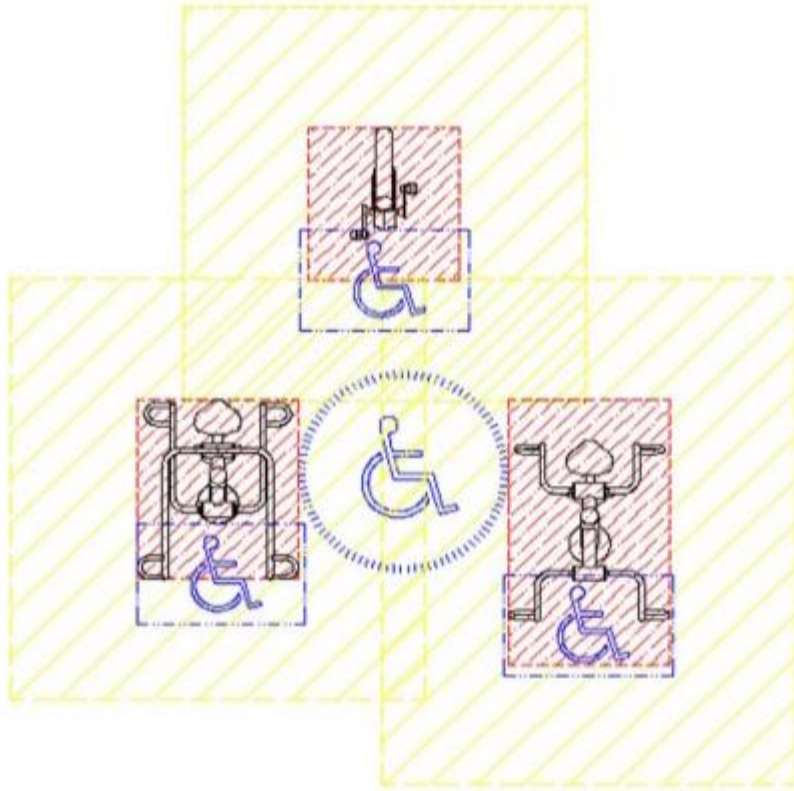
Fitness Trail

Product Selection



- Worked with New York City Parks to select a grouping of approved Accessible Outdoor Fitness Products to be included in future projects

Accessible Routes



- ASTM F3101-15 states “Outdoor fitness equipment placement shall meet DOJ 2010 Standard for Accessible Design requirements for accessible routes, passage, turning areas and surfacing of applicable standards.”
- Worked with Bill Botten to ensure adequate routes of travel to the equipment and mobility device clear spaces are identified for layout.
- Implemented CAD blocks and resources for project managers and designers to use when developing spaces.

Final Application



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Contact Information and Resources



PlayCore Resources

- Questions
 - core@playcore.com
- Request Outdoor Adult Fitness Guidebook
 - www.playcore.com/programs/outdoor-adult-fitness
- Newsletter
 - www.playcore.com/newsletter
- Funding Tool
 - www.playcore.com/funding
- Resources
 - www.playcore.com/resources
- COVID19 Resources
 - www.playcore.com/COVID-19-play-recreation-resources



A PLAYCORE Company





Ileana Rodriguez

Cuba- American

Master in Architecture

Business Owner

Paralympic Swimmer –
LONDON 2012

Houston Planning Commission

Chef de Mission Refugee
Paralympic Team - Tokyo 2020

Athlete Representative for the
Americas Paralympic
Committee



Accessibility + Design = Inclusion



Olympic and Paralympic Training Center

A stylized, white paper-cut style illustration of a city skyline against a light blue background. The skyline includes various buildings, a bridge on the left, and a prominent clock tower. The text 'iDESIGN ACCESS' is centered in the upper half, with 'ARCHITECTURE AND ACCESSIBILITY' below it.

iDESIGN ACCESS

ARCHITECTURE AND ACCESSIBILITY

Ileana Rodriguez
i.Rodriguez@idesignaccess.com
(305) 322 0900

QUESTIONS for Panel 3?

**You may type and submit
questions in the Q&A Area**



Thank you for Joining us today.

**This concludes our event. This event has been
recorded and the recording will be available
on the Access Board's homepage and its
YouTube Channel soon.**



Meeting of the
U.S. Access Board
will resume with
regular business at
3:30 p.m. ET

Moving Forward:

Access to Inclusive Fitness Equipment

