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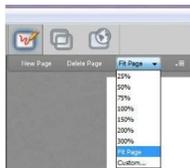
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Today's Webinar Presenters



Michele Erwin
All Wheels Up Founder
and President



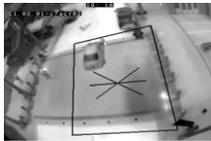
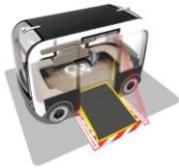
Seanna Kringen
Beneficial Designs
RecTech



Bill Botten
Accessibility Specialist
US Access Board

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Ad Hoc Committee on Frontier Issues



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Agenda

- Overview of recent topics
- All Wheels Up
- Inclusive Fitness
- Open Q & A

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MicheleErwin@AllWheelsUp.org

www.AllWheelsUp.org



ALL WHEELS UP, INC.

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WHO IS ALL WHEELS UP?

- AWU is a 501(c)(3) non-for-profit organization
- AWU is the ONLY organization in the world crash testing wheelchair restraints for In-cabin use

 @allwheelsup

 All Wheels Up

 www.allwheelsup.org

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PROJECT MISSION

- Our Mission is to provide a wheelchair spot on planes for people with severe physical disabilities traveling on commercial and private airplanes

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AWU KEY AREAS OF FOCUS

- Wheelchair user's personal and physical safety
- Tarmac turn time reduction and affiliated cost savings
- Reduction of annual wheelchair damage and affiliated costs
- Increasing the airlines customer base (20 million wheelchair users globally)

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AGENDA

- **CREATING ACCESSIBLE AIR TRAVEL**
- PHASE 1: WHAT EXISTS TODAY
- PHASE 2: WHAT NEEDS TO BE DONE
- PHASE 3: STRATEGY MOVING FORWARD

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“the most powerful man in the world being carried like a baby...”
-Winston Churchill

SCARECROW (AKA: AIR FORCE ONE), 1943



The very first wheelchair accessible plane

1943 President Franklin D. Roosevelt flew in the first ever modified wheelchair accessible plane. The plane was outfitted with an elevator and an aisle and cabin space wide enough for FDR to use his wheelchair.

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WC TIED-DOWN ON MILITARY EXERCISES



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AIR CARRIERS ACCESS ACT (1986)

□ ACAA AMENDMENTS ACT OF 2017

- *Section 9: Study on In-Cabin Wheelchair Restraint Systems* The United States Access Board will conduct a study to determine the ways in which individuals with significant disabilities who use wheelchairs, including power wheelchairs, can be accommodated through cabin wheelchair restraint systems. Further, DOT will put forward minimum guidelines consistent with the findings.

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FAA Reauthorization ACT (H.R. 2997) or 21ST Century AIRR ACT

- SEC. 543. **Feasibility study on in-cabin wheelchair restraint systems.**
- (a) Study.—Not later than 2 years after the date of enactment of this Act, the Secretary of Transportation, in consultation with the Architectural and Transportation Barriers Compliance Board, aircraft manufacturers, and air carriers, shall conduct a study to determine—
 - (1) the feasibility of in-cabin wheelchair restraint systems; and
 - (2) if feasible, the ways in which individuals with significant disabilities using wheelchairs, including power wheelchairs, can be accommodated with in-cabin wheelchair restraint systems.
- (b) Report.—Not later than 1 year after the initiation of the study under subsection (a), the Secretary of Transportation shall submit to the Committee on Transportation and Infrastructure of the House of Representatives and the Committee on Commerce, Science, and Transportation of the Senate a report on the findings of the study.

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Current Documents under the FAA

FAA DOCUMENT TRANSPORTATION OF PATIENTS OF AIR AMBULANCE SECTION II 7.2

Passengers with known medical conditions and disabilities are covered under the Americans with Disabilities Act and the Air Carrier Access Act. These federal laws require commercial carriers to provide transport to those people with disabilities whose condition does not represent a threat to the health and safety of themselves or others. For example, paraplegics must be provided with seating on a commercial airliner and their wheelchair or transportation device carried at no extra charge. Paraplegics who have good upper body strength prefer aisle seating and can often transfer themselves from the special aircraft aisle wheelchair to the seat. **Quadriplegics will prefer cabin wall seating as providing more support on one side.**

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Current Documents under the FAA

FAA DOCUMENT TRANSPORTATION OF PATIENTS OF AIR AMBULANCE SECTION II 7.2 (cont'd)

Bulkhead seating also provides more room for transfers. Seating can be specially requested and like all accommodations, should be done at least 48 hours before scheduled travel. Failure to provide 48 hours advance time may prevent the airline from accommodating a request, particularly in regards to oxygen. These levels have forced airlines and airports to make numerous changes to their facilities in order to accommodate the needs of the disabled. Spill able batteries from powered wheelchairs, normally considered to be unacceptable hazardous cargo, become a waived item requiring special handling.

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ALL WHEELS UP'S PROPOSED SOLUTION

Evaluation of Wheelchairs, Wheelchair Tiedowns
Occupant Restraint Systems, and Occupant
Protection while in a Wheelchair
on a Transport Plane

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THE 16 G RULE

- According to the AC25.562-1B "a single 16G longitudinal or 14G vertical test is sufficient to substantiate the attachment between structural members with a different design philosophy or variations within the same design philosophy, provided it can be determined which test conditions is critical for the attachment" (Bahrami, 2006).

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THE 16 G RULE

- In 2011, Q'straint's wheelchair tiedown occupant restraint systems passed a 20G sled crash test. Surpassing the 16G sled test of airplane seats that the FAA has set as the industry standard.

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TIEDOWN RESTRAINTS

- AWU has already tested this wheelchair tie down and occupant restraint system (WTORS) – **QRT-360**
- A Surrogate wheelchair was used (the same surrogate wheelchair used in automobile crash tests)
- Airplane floors have the same or similar "L" track as the accessible vans and buses



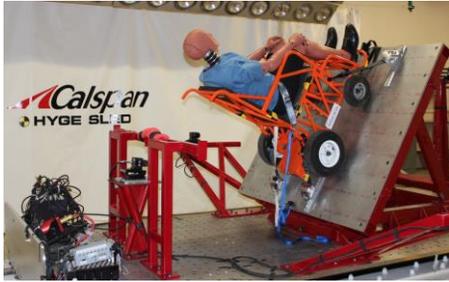
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FAA'S TEST CRITERIA

- 1) WILL THE WHEELCHAIR FLY OUT OF THE PLANE
 - AWU RESULTS = NO
- 2) WILL THE WHEELCHAIR FALL OVER ON ITS SIDE
 - AWU RESULTS = NO
- 3) WILL THE TIE-DOWNS RIP AWAY FROM THE FLOOR HOLD
 - AWU RESULTS = NO
- 4) WILL THE STRAPS TEAR DURING CRASH TEST
 - AWU RESULTS = NO

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AWU MAKES HISTORY



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16 G PULSE TEST

AIRPLANE SEAT CRASH TEST – 16G



All Wheels Up Crash Test – 16 G



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PLAN OF ACTION – PHASE 1

Projects	Status
Research, Organizing and Sharing of Data	Complete
Initial Blue Print for first study	Complete
Fabrication of sled	Complete
Actual Crash Test at an FAA approved facility	Complete
Data Analysis (post-test observations, measurements and calculations, raw data, photos and video)	Pending
Creation of a Standards Committee for crash Testing Wheelchairs for commercial/private flight, just as there are automobiles, trains and buses	Pending

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PLAN OF ACTION – PHASE 2

Projects	Status
Secure Funding	PENDING
Test Wheelchairs with QRT-360 Tie-downs (14CFR25.561 & 562/14CFR23.561 & 562)	PENDING
Test QLK with QRT-360 Tie-downs – Surrogate wheelchair and wheelchairs (14CFR25.561 & 562/14CFR23.561 & 562)	PENDING
White Paper Studies – Specific Request from the United States Access Board:	PENDING
Tarmac Turn Time Savings study:	PENDING

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OTHER TIE-DOWNS WE PLAN TO TEST

- ❑ QUBE
- ❑ QUANTUM



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ADDITIONAL TESTING

**BEFORE ACCESSIBLE FLIGHT IS POSSIBLE,
MORE TESTING IS NECESSARY**

- ❑ ALL MANUAL AND POWER WHEELCHAIR MODELS
- ❑ HEAD RESTS
- ❑ SEAT BELTS & RESTRAINTS (NOT LAP BELTS)
- ❑ BATTERIES (BATTERIES HAVE BEEN TESTED FOR TRANSIT FLIGHT)
- ❑ STRUCTURE OF THE AIRPLANE FLOOR

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OTHER AREAS OF RESEARCH

- WHITE PAPER STUDIES:
 - FOCUSED ON WC USER PHYSICAL SAFETY
 - WOULD RIDERSHIP INCREASE IF WHEELCHAIR USERS WERE PROVIDED A WHEELCHAIR SPOT ON PLANES

- TARMAC TURN TIME SAVINGS
 - UNIVERSAL DESIGN/SIMULATION OF WC USER USING A WHEELCHAIR SPOT IN-CABIN

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ANIMATION OF PROPOSED SOLUTION

Find this video and share: www.allwheelsup.org



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PHASE 3 – STRATEGY MOVING FORWARD

- **FUNDING**
 - GOVERNMENT FUNDING
 - OUTSIDE FUNDING (Foundation, Sponsors, Individuals)

- **PARTNERSHIPS**
 - Airlines, plane manufacturers, wheelchair manufacturers, Universities

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PARTNERSHIPS

- CAMI (Civil Aviation Medical Institute)
- FAA/CAA/EASA
- Universities (University of Michigan, Johns Hopkins)
- The United States Access Board
- Q'Straint - Leading Manufacturer of wheelchair restraint systems
- STANDARD ORGANIZATIONS: ANSI (American National Standard) RESNA (Rehabilitating Engineering and Assistive Technology Society of North America), ISO

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TAKE AWAYS

- WHEELCHAIR ACCESSIBLE AIR TRAVEL WILL HAPPEN
- ALL WHEELS UP IS THE ONLY ORGANIZATION CONDUCTING CRASH TESTING
- WORKING TOGETHER TOWARDS PARTNERSHIPS AND FUNDING

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SPECIAL THANKS TO:

- Q'STRAIT (USA/UK) – DONATION OF RESTRAINTS AND SURROGATE WHEELCHAIR
- CALSPAN (USA)
- FAA (USA)
- ISTAT FOUNDATION (USA) – PROVIDED FUNDING
- LIGHT THE WORLD (HOLLAND) – PROVIDED FUNDING
- UNICO (USA) – PROVIDED FUNDING

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References

- Bahrami, A. (2006). Dynamic Evaluations of Seat Restraint Systems and Occupant Protection on Transport Airplanes. Federal Aviation Administration. *Advisory Circular (AC 25.562-1B)*. Q'Straint. (n.d.). Retrieved June 2011, from www.qstraint.com.
- Q'Straint. (2011). Retrieved June 2011, from www.qstraint.com.

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Inclusive Fitness Equipment

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RERC RecTech (Recreation Technologies) Inclusive Fitness Standards

Principal Investigator:
Peter Axelson, MSME
Research Associate:
Seanna Hurley-Kringen, MS



This project is funded by the RERC for RecTech through the National Institute on Disability, Independent Living, and Rehabilitation Research grant # 90REGE0002-01-00.

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Fitness Equipment and Facility Standards

- Promote “mainstream” inclusive fitness environments within public facilities
 - Universal design
 - youth/elderly, range of abilities
 - Health/social benefits for everyone
 - Decrease secondary health conditions
 - Increase social interaction
 - Decrease costs
 - Participation
 - Health maintenance
 - Comply with the Americans with Disabilities Act (ADA)

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What about Fitness Equipment and Programs?

ADA covers the built environment
but once parked and inside a public
fitness facility...

What does a person with a
disability have access to?

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Experience in Fitness Centers Today



Can't negotiate safely
around or on/off
equipment

Give up??

Or risk injury??



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Experience in Fitness Centers Today



Non-grippable treadmill handrails
No straps on foot pedals =
Not usable for people with sensory and/or functional impairments

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Experience in Fitness Centers Today

Exercise handles out of reach/freefall
Pull pin out, 10- to 15-lb. bar falls



Give up?? Call for help??

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Experience in Fitness Centers Today



Most common cardio fitness equipment =

No cardio options for wheelchair users



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Experience in Fitness Centers Today

Staff/trainers experienced with disability
Inclusive programming/environment

Both almost **nonexistent**

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Inclusive Fitness Has Momentum

- Inclusive fitness (IF) is a priority in the US
 - Department of Justice (DOJ) (2010)
 - Obama / ADA (2012)
 - Congress / The Exercise and Fitness for All Act (2014)
- There is a lack of specificity in current IF requirements
 - What makes fitness equipment, layout, programming, etc., accessible?
- Standards translate inclusive fitness requirements into practice
 - Standards are under development—complete set of instructions
 - Standards provide objective specifications and test methods
 - Without standards and guidelines (instructions), no one in the fitness industry knows how to implement these laws and mandates to provide access for people with disabilities

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RESNA Standards Committee on Inclusive Fitness (IF)

RESNA IF Guideline—Defines set of instructions for Universal Design/Inclusive Fitness (UD/IF) facilities

- **Layout**—Comply with US Access Board
- **Equipment scoping**
 - Specify minimum of each type of UD/IF equipment
 - Require one wheelchair-accessible aerobic piece of equipment
 - Equipment **validity/usability** testing
 - UD/IF equipment **3rd-party certification**
- **Staff/trainers**—Knowledge of disability and communication methods
 - ACSM CIFT
 - UK IFI
- **Policies**—Attitudes
- **Inclusive programming**
- **IF symbol**—Demonstrates compliance wherever used

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Minimum Scoping Requirements for UD/IF Equipment

Recommendation for types of equipment:

- Bicycle
- Elliptical
- Treadmill
- Upper body ergometer
- Upper body strength equipment
- Lower body strength equipment
- Torso strength equipment

But how is UD/IF equipment **created, tested, and certified?**

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ASTM UD/IF Equipment Standards

- **ASTM F08.30 Fitness Products**
 - Develop fitness equipment standards—100 members
 - Cybex International, ICON Health & Fitness, Johnson Health, Precor USA, Nautilus, IncludeFitness, TriActive America, and Life Fitness
 - **F08.30 Tag Group IF:** Users, disability advocates, manufacturers, test laboratories, and legal experts
 - Bi-annual meetings since Oct 2008
- General ASTM F08.30 UD/IF Standards—PUBLISHED
 - ASTM F3021/F3022 **Standard Specification and Test Method for Universal Design of Fitness Equipment for Inclusive Use** by Persons with Functional Limitations and Impairments
 - 117 general requirements applicable to all fitness equipment
 - Identified gaps in access needing further research

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ASTM F08.30 Tag Group IF

- Additional UD/IF **equipment-specific** requirements
 - ASTM F2810/F2811 Standard Specification and Test Methods for **Elliptical** Trainers—PUBLISHED
 - ASTM F2216/F2277 Standard Specification for Selectorized **Strength Equipment**—PUBLISHED
 - ASTM F1250/F3023 Standard Specification and Test Methods for Stationary Upright and Recumbent Exercise **Bicycles and Ergometers**—BALLOTING
 - ASTM F2115/F2106 Standard Specification and Test Methods for Motorized **Treadmills**—BALLOTING

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ASTM F08.30 Tag Group IF

Fitness equipment **manufacturers are involved** in each step of the development process

- **Supportive** of UD/IF equipment
 - Incorporating UD/IF specifications into mainstream ASTM standards
 - Approval is demonstrated through the balloting process
- **Check/balance** system in place
 - We educate the manufacturers on **user needs and wants**
 - Manufacturers educate us on specifications that are **technologically and financially feasible**

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Cycle User—89 yrs. old, blind

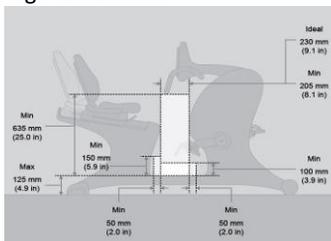


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UD/IF Recumbent Cycle Requirements

- **Walk-through** design dimensions

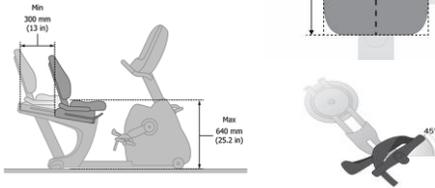
– Walk-through structure no higher than 125 mm



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UD/IF Recumbent Cycle Requirements

- Seat dimensions—**height/width/depth**
- Pedals
 - Self-righting
 - Heel/toe retention



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Treadmill User—post stroke, uses cane



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UD/IF Treadmill Requirements

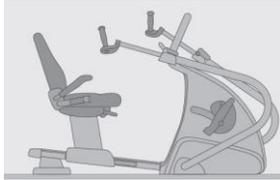
- **Side handrail**—Functional use during exercise
- Minimum grip length of 175 mm
- Optimized in shape to facilitate grip
- Suitable material to reduce slippage
- **Maximum step-on height** 170 mm
- **Safety stops** within reach from the exercise position and 3rd party
- **Minimum start speed** 0.8 km/h (0.5 mph), increase increments 0.2 km/h (0.1 mph)
- Moving **surface markings** shall have significant color value contrast



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UD/IF Elliptical Requirements

- **Standing ellipticals**
 - Fixed **handlebar** requirements
 - Provide height range of 1000 mm to 1400 mm
 - Mechanism to prevent hand from slipping off
- **Seated ellipticals**
 - **Swivel seats**
 - **Foot support guards**
 - 30 mm/12mm along 80% of the inside/outside edge



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UD/IF Console Requirements for People with Vision Impairment (VI)

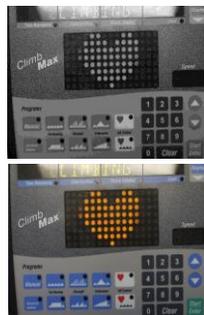
- ASTM members **required data to demonstrate need** and justify costs
- **Dr. Barstow, UAB, joined team**
 - Provided user testing/feedback
 - Strengthened access requirements for vision impaired/blind
- **IRB-approved study (n=200)**
 - Mixed-methods survey (33 questions)
 - Determine **differences in console experience/preference**
- Results to date (n=88)
 - 82% with VI and 18% without VI
 - **Users with VI want access to all features**
 - Audio feedback—smartphone acceptable
 - Enhance visibility and tactile features
 - www.surveymonkey.com/r/VIsurvey

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UD/IF Console Requirements

ASTM F3021/F3022 (2016) **now contains 28 audible feedback** requirements due to VI expertise

- **Text-to-audio** output
 - **Function buttons:** start/stop, increase/decrease grade/resistance, programming options/changes
 - **Performance** status/summaries: heart rate, calories, time, etc.
- Main controls must have min. **70% color value contrast**



UD/IF Strength Equipment Requirements

- **Seat/back support dimensions**
- **Adjustable start positions**
- **Movable hand grip storage**
 - 400 mm to 1400 mm range
- **Low start weights**
- **Wheelchair user warnings—BIG concern for manufacturers**
 - Maximum loads
 - Correct positions for stability



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Wheelchair Stability

BE SAFE!
Guidelines for use of fitness equipment for persons using mobility devices

INCORRECT USE OF FITNESS EQUIPMENT

<p>Rearward Instability Any forward, upward, or downward pushing may cause rearward tipping.</p>	<p>Rearward Instability Five weights that are too close and behind the heart may cause rearward tipping.</p>	<p>Lateral Instability Too much weight on one side may cause lateral tipping.</p>	<p>Forward Instability Raising front casters too high may cause forward tipping.</p>
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CORRECT USE OF FITNESS EQUIPMENT

<p>Rearward Stability The end of a support may prevent rearward tipping.</p>	<p>Rearward Stability A wheel shock and weight on foot casters may prevent rearward tipping.</p>	<p>Lateral Stability Leaning to the opposite side of the weight may prevent lateral tipping.</p>	<p>Forward Stability Raising front casters too high may prevent forward tipping.</p>
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WARNING: Failure to take stability issues into consideration could cause you to tip over while exercising in your manual or powered mobility device and could result in severe injury or death. Always inspect exercises for the first time with the assistance of a qualified and trained professional for your mobility device to be placed in the direction. Always use your mobility device in position prior to exercising. The use of wheel locks is recommended during exercise. Powered mobility devices should be turned off prior to exercise.

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www.nchpad.org

Wheelchair Max Load

POTENTIAL OVERLOADING OF YOUR MOBILITY DEVICE



WARNING: The combination of your body weight and the exercise weight that you are lifting while seated in your mobility device effectively increases the total payload weight on your mobility device. Determine the maximum recommended weight capacity of your mobility device and stay within this limit to ensure that you will not cause over stressing to the structure of your mobility device. Exceeding the maximum payload of your mobility device could result in failure of one or more components of your mobility device and could result in severe injury or death.

The management of the facility allows access to the equipment in this facility by persons of all abilities without prejudice. Reasonable accommodation under the Americans with Disabilities Act will be made to enable you to access any equipment that you desire to use. All individuals should consult with their healthcare provider before engaging in stressful strength or aerobic training.

www.nchpad.org

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Testing Fitness Equipment per ASTM F08.30 UD/IF Standards

Lakeshore RecTech Test Laboratory

- Preparing to perform **UD/IF equipment validation** testing once equipment is available
 - Verify equipment meets ASTM UD/IF Standards
 - Created **data form**/test report
 - ASTM F3021/F3022 General
 - **Trial testing** performed
 - UD cardio/UD strength
 - Manufacturers were given results

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Consumer Usability Testing of ASTM F08.30 UD/IF Equipment

Lakeshore RecTech Test Laboratory

- Verify **ASTM UD/IF equipment usability**—meets user needs
- Created **subject usability data forms** for treadmills and cycles based on UD/IF criteria
- Likert scale rankings
 - **Access, comfort/adjustability, start/stop, programs**
 - Questions answered by test administrator and user
- Protocol
 - Trial **testing with 5 users** (CP, TBI, blind, stroke, no impairment)
 - **2 treadmills/2 recumbent cycles** (newer vs. older models)
 - IRB pending for full user testing

3. **Step Height.** How easy or difficult was it to step on the machine?
 Very Easy Easy Somewhat Difficult Very Difficult Unable Not Available
 1 2 3 4 5 N/A

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Cycle User Testing—Discernable UD/IF Criteria

- How **easy or difficult** is it to put your **foot in the pedal**?
 - rank—following ASTM UD/IF standards will improve rank (rank 1 = 100% UD/IF Eq.)
 - Goal: Heel and toe retention
- Ranked 7 (easier)
- Ranked 10 (harder)



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Treadmill User Testing— Discernable UD/IF Criteria

- How **easy or difficult** was it to **step on** the machine?
 - rank—following ASTM UD/IF standards will improve rank (rank 1 = 100% UD/IF Eq.)
 - Goal: 170 mm step-up height

– Ranked 7 (easier)



– Ranked 10 (harder)



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IF Environments—Staff/Trainers, Policies, Programming

- Considered **currently available standards, guidelines, literature, and best practices**, for example:
 - ACSM—IF trainer certification
 - UK IFI—IF packages/kits/policies
 - UNESCO—UTMF model, UFIT
 - RESNA—literature
- Identifying areas needing the most **future work**

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IF Facility Policy Goals

- 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

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IF Symbol Research

- **IF symbol** to convey access to people of all abilities
 - Equipment **manufacturers requested symbol** for equipment meeting ASTM UD/IF Equipment Standards
 - Positive connotation
 - Indicate usable by all
 - » Restroom versus parking spot
 - Investigating uses in other UD/IF environments: **facilities, programming, etc.**

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IF Symbol Research

- IRB-approved study (n=825)
 - Mixed-methods survey (31 questions)
 - demographic information
 - rankings of the 9 symbols
 - qualitative data
 - international participation
 - **Symbol most understandable by users**
 - ASTM F3021 now references this IF Symbol for use on fitness equipment that meets the accessibility standards
 - Full survey results to be published soon
 - Investigate applicability to inclusive fitness facilities/programming
- **Contact Beth Barstow, PhD, OTR/L, SCLV, FAOTA for more information:**
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Volume 1: Draft RESNA Standard for Inclusive Fitness Environments (IF-1)

- Draft RESNA IF-1 consists of the following sections:
 - Section 1: Providing and Marketing Inclusive Fitness Environments
 - Section 2: Disclosure of Published Methods and Requirements for Creating Inclusive Fitness Environments and Implementing Inclusive Fitness Practices
 - Section 3: Specifications, Test Methods, and Best Practices for Facility Accessibility
- The Draft RESNA IF-1 went through a pre-ballot and is being revised per the comments for an official RESNA ballot

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Inclusive Fitness Standards

- Uses **universal design** to improve accessibility for all
- Has a **long-term impact** on the fitness industry, applying to public and private fitness centers
- Enables policy makers to **create policies and regulations**
- Defines **requirements** and **increases objectivity** of testing/evaluation through **3rd-party certification**
- Creates **instructions** for providing **full access fitness environments**
 - Improves access to equipment through **facility layout** guidelines
 - Provides guidance on **minimum equipment types** and minimum percentages of UD/IF equipment required
 - Defines a **standard for accessible fitness equipment**
 - Manufacturers can design and build to it
 - Increases the safety and quality of products
 - Defines **guidelines for educating staff and trainers** in inclusive fitness
 - Encourages more **positive attitudes** and policies
 - **Removes barriers** to participation in programming
 - Develop **IF symbol**

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Outcomes

- Enable people with functional limitations to **identify** fitness facilities, trainers, and equipment that meets their needs
- Allow people with functional limitations to **participate** in exercise with **family and friends**
 - Community inclusion
- Assist facility operators, trainers, and staff with creating IF facility **transition plans**
- Create **resources** for IF training, layout, equipment, policies, communication, and programming
- Create **Lakeshore RecTech Test Laboratory**

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RESNA IF / ASTM F08.30 IF Standards Committees

- IF Committees are **advocating for more than the minimum requirements**
 - Expand inclusive fitness to more people worldwide
- **US Access Board** critical to this work
 - Participating in both RESNA IF and ASTM F08.30
 - Providing **critical feedback** on draft IF requirements, current best practices, and needs of people with impairments
 - Must **keep momentum going forward**
 - Continued collaboration

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Questions?

You may type and submit questions in the
Chat Area Text Box or press Control-M
and enter text in the Chat Area

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Where to direct questions



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*"Working toward universal access
through research, design &
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Thank you for participating
in today's webinar



Next session:

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