



Removing Barriers to Health Clubs and Fitness Facilities

A Guide for Accommodating All Members, Including People with Disabilities and Older Adults

2001

Developed by



North Carolina Office on Disability and Health
in collaboration with



The Center for Universal Design




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North Carolina Office on Disability and Health
ISBN 0-9709924-5-9

This publication was made possible by a grant
from the Centers for Disease Control and Prevention,
National Center on Birth Defects and Developmental
Disabilities. (U59/CCU403365-12)



The **North Carolina Office on Disability and Health**
is a partnership effort of the NC Division of Public
Health of the Department of Health and Human Services
and the Frank Porter Graham Child Development Center
at UNC-CH to promote the health and wellness of
persons with disabilities in North Carolina.



The **Center for Universal Design** is part of the
College of Design at North Carolina State University in
Raleigh, North Carolina. The Center serves as a national
research, information, and technical assistance center
that evaluates, develops, and promotes accessible and
universal design in housing, public and private facilities,
and consumer products.



Frank Porter Graham Child Development Center
The University of North Carolina at Chapel Hill



North Carolina Division of Public Health
Women's and Children's Health Section

Suggested citation:

North Carolina Office on Disability and Health (2001). *Removing
Barriers to Health Clubs and Fitness Facilities*. Chapel Hill, NC:
Frank Porter Graham Child Development Center.

Copies can be downloaded in PDF or html formats from the
NCODH website at <http://www.fpg.unc.edu/~ncodh/>
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3,000 copies of this document were printed at a cost of
\$4,850.00, or \$1.62 each.

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Special thanks to

David Christmas, Director, Durham (NC) YMCA

Terri Edwards, East Carolina University Recreational Services

Acknowledgments

We would like to thank the following individuals for their critical review of this guide.

Judy Burke
Developmental
Disabilities
Training Institute
Chapel Hill, NC

Larry Burt
Centers for Disease
Control and Prevention
Atlanta, GA

Theresa Chase
Craig Hospital
Englewood, CO

June Isaacson Kailes
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Karen Luken
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Dot Nary
Research and
Training Center on
Independent Living
Lawrence, KS

Jim Rimmer
National Center on
Physical Activity and
Disability
Chicago, IL

Libby Rogers
North Carolina Division
of Public Health
Wilmington, NC

Lois Thibaut
The Access Board
Washington, DC

Mary Helen Whitten
Centers for Disease
Control and Prevention
Atlanta, GA

This guide would
not have been
completed without
the significant
contribution of
the staff of the
North Carolina Office
on Disability and Health

Donna Scandlin
Marcia Roth
Carol Tant
Chris Mackey
Cheryl Waller
Pam Dickens





How usable is your health and fitness facility?

Do any of your members have joint or back conditions that limit the kind of exercise they can do?

How easily can a wheelchair user move around the exercise equipment?

Does your staff know how to assist someone with stamina limitations pursue their exercise goals?

Does your facility have different types of exercise equipment that can be used by people with different levels of physical ability?

The message of health, wellness, and disease prevention through physical activity has become more widespread in recent years. Along with much of the population, people with disabilities and older adults are looking toward health clubs, gyms and fitness centers as a means to be more active and achieve a healthy lifestyle. Are health clubs and fitness facilities prepared to meet this growing demand and provide the same level of access for all members?

When the term “accessibility” is used, many people think of the Americans with Disabilities Act (ADA). But accessibility is more than a ramp into the building and a larger toilet stall. In a fitness facility, exercise

equipment, programs, and policies themselves contribute to an environment that promotes equal access and use by all members. Often the basic requirements of the ADA are not sufficient by themselves to offer members the flexibility and receptiveness that will allow them to pursue their exercise goals. The more inclusive concept known as “universal design” presented in this guidebook increases usability for a broader population. Universal design considers how the built environment and products can be used to the greatest extent possible by everyone, regardless of age or ability.

This guide suggests ways your fitness facility can go beyond the minimum requirements of the law and make your facility and services more appealing and accessible to more people. The illustrations and information in this book demonstrate how barriers in the physical environment can be removed and how exercise equipment and fitness programs can be designed to create a welcoming facility that will attract additional members.





Five Suggestions for Making Your Center a Welcoming Facility

Remember that any effort to address the needs of people with disabilities is an opportunity to market and expand your membership to a growing population. (See pages 4–6.)

Assess how environmental barriers can be removed and accessible features incorporated into all areas of your facility. (See pages 7–9.)

Go beyond the minimum requirements of the law to incorporate principles of universal design to make your facility usable to many more people. (See pages 10–25.)

Purchase or replace exercise equipment with types of equipment that offer more features which make it usable for those with varying degrees of ability. (See pages 26–28.)

Treat people with disabilities as you would any other member, taking into account individual needs and utilizing the many exercise options that may be available. (See pages 29–35.)

An Untapped Market

Expanding Your Target Membership

There are as many as 54 million Americans, or nearly 20 percent of the population, with a disability or activity limitation. A disability can affect walking, seeing, speaking, hearing, or thinking to varying degrees. It can be temporary or progressive, visible or invisible. The number of people who experience some kind of disability during their lifetime increases as the population ages. This creates a growing market for fitness facilities to target in order to expand their business and enhance their bottom line.

The 1996 Surgeon General's Report on Physical Activity and Health provided a new perspective on the benefits of physical activity for all Americans, including people with disabilities and older adults. Disability is not an indicator of poor health, requiring specialized programs for physical activity. Instead, people with disabilities look toward community facilities to meet their health and exercise needs. For many people with disabilities, "Exercise is not an option, but a necessity for management of the condition," says Kerri O'Brien, Fitness and Retention Manager for BM Sports Clubs, and member of the Life Fitness Academy. And for many older adults, being fit allows them to choose where to live and how to spend their time.

Marketing Approaches

If you want to appeal to members with a wide range of abilities, consider how the format, readability, and portrayals in your promotional and marketing materials may discourage or encourage membership. In many cases, simple changes can create a more welcoming environment for people with disabilities and for older adults.

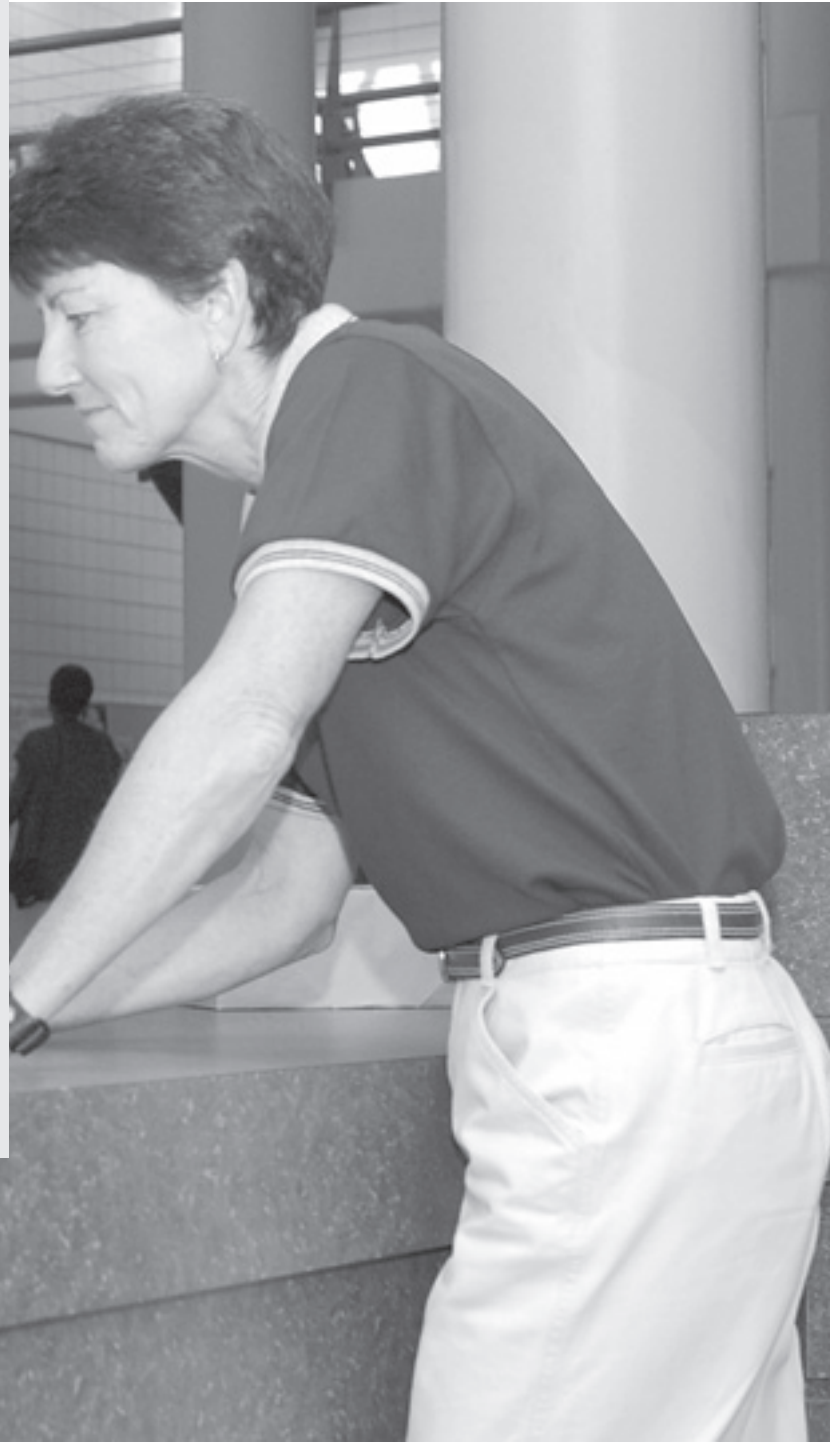


“

Part of the problem is that club owners and exercise equipment manufacturers traditionally focused on what is generally classified as ‘the 7 percent.’ Even though the demographics of health clubs are changing, and people with disabilities and the elderly are becoming a larger part of the general population, many clubs are still trying to attract the 7 percent of the population between the ages of 19 and 30, and the equipment that is usable by a larger portion of society is slow to appear in facilities.

”

Bennett, R.P. (1999). “Equipping for People with Disabilities,” *Fitness Management*, 15, 32–33.



Increase the Appeal of Your Facility to New Members

Remove physical and communication barriers to make your facility more accessible.

Offer trial visits.

Have a sliding fee scale, or offer scholarships.

Create a family-friendly environment.

Offer introductory classes for those with little exercise experience.

Offer a wide variety of equipment, programs, and classes for all fitness levels.

Provide more than one way for accessible aerobic exercise.

Train staff to modify various exercises and equipment for different ability levels.

Making Materials More Accessible

Use at least 12-point type [like the words in this line].

To create a large print version of services you offer and the membership contract, use

16-point type [like this] or
18-point type [like this]

Avoid fancy fonts . . .

LIKE THIS, OR

Like this, or

LIKE THIS

Avoid italics or compressed fonts . . .

Like this, or

Like this, or

Like this

Use a simple format.

Don't clutter text with shading or overlays.

Avoid glossy white paper.

Use at least 1-inch margins.

Readable Materials

Older adults and people with some reduction in vision may have difficulty reading small print on crowded brochures, ads, and instructions on exercise equipment. You can easily incorporate the guidelines on the left when developing information to make sure that the promotional materials you develop can be read and understood by a diverse audience.

Demonstrating Diversity

Does your staff realistically reflect the population in age and physical adeptness? Is diversity depicted in photographs and graphics in your posters and written materials? When preparing marketing materials, consider including a picture of someone with a disability or an older adult exercising. Creating an atmosphere that focuses less on youth and physical prowess and more on health and personal progress contributes to a welcoming environment that encourages everyone to define personal exercise goals and work toward reaching them.

Where to Find Your Target Audience

Has anyone with a disability ever inquired about membership? Have you marketed in the right places? It is true that as your facility becomes more and more usable, word of mouth will attract a broader range of people. Market your facility to places in the community that serve people with disabilities and older adults. These may include senior centers, recreation organizations, and local disability organizations and support groups. Also consider radio advertising, as this is a source of local community information for many people with visual disabilities.



Providing Access for All Members

If members or potential members cannot easily move around and access all parts of your facility, they may not be able to achieve all the health benefits of belonging to a fitness club. You can ensure an accessible facility by increasing your understanding of how the Americans with Disabilities Act applies to fitness facilities and how this basic access can expand to a broader population by incorporating universal design.

The Americans with Disabilities Act

The Americans with Disabilities Act (ADA), passed in 1990, is an important piece of civil rights legislation that prohibits discrimination against, or segregation of, people with disabilities in all activities, programs, or services—including fitness facilities. To comply with the ADA, you must make every reasonable attempt to enable people with disabilities to get into and around in your facility, and, once there, to receive the same benefits, services, and information provided all other participants.

Health or fitness programs provided by state and local governments, such as parks and recreation programs, or by other groups that receive public funding fall under Title II of the ADA and must be accessible. All privately-owned fitness facilities are considered “public accommodations” and fall under Title III of the ADA. They are expected to remove barriers when it is “readily achievable” to

Selected ADA Features Relevant to Health and Fitness Centers

Accessible parking spaces that are wide and close to entrance

Accessible front entrance with curb cuts at appropriate locations

Interior and exterior doors that are at least 36 inches wide and easy to open

Low counters in reception areas

Low counters at snack and juice bar

Space for wheelchair user to approach and to maneuver between pieces of exercise equipment

Accessible bathrooms large enough for a wheelchair user to maneuver

Accessible locker area and changing room

Accessible shower stall with bench

Accessible sauna and steam room

Accessible entrances into swimming pool

Audible and visual alarm systems

Tactile lettering and Braille on selected signs

Accessible water fountains and phones

do so. Barriers that are considered readily achievable to remove are those that can be changed easily and carried out with little or no expense. Examples specifically cited in the ADA regulations include: creating designated accessible parking spaces; making curb cuts in sidewalks; installing ramps; repositioning shelves; rearranging tables, chairs, and vending machines; repositioning telephones; adding raised markings on elevator control buttons; widening doors; installing flashing alarm lights; installing grab bars in toilet stalls; rearranging toilet partitions to increase maneuvering space; insulating lavatory pipes under sinks to prevent burns; installing a raised toilet seat; installing a full-length bathroom mirror; and removing high-pile carpeting.

What is considered “readily achievable” is based on a company’s size, financial condition and the existing site conditions. What might be appropriate for a large chain or franchise of fitness facilities is different from what might be expected of a modest, private health club or exercise studio. But certainly, moving exercise equipment to provide a little extra floor area would be considered a barrier removal that is “readily achievable” for almost any fitness facility to accomplish. There are many tax incentives available to facilities that make accommodations for people with disabilities under the ADA (see page 36).

When you construct new facilities or alter existing facilities, the ADA requires compliance with the ADA Standards for Accessible Design to ensure easy and convenient access and use by people with disabilities. For more information on accessibility guidelines and standards for new construction and alterations, see Resources on page 36. In addition,

the US Architectural and Transportation and Barriers Compliance Board (Access Board) recently developed ADA guidelines for the design of recreation facilities that include specifications for fitness facilities. They may be ordered by contacting the Access Board at (800) USA-ABLE or by visiting their website at www.access-board.gov. The guidelines provide valuable information about building new or modifying existing fitness facilities. With minor modifications, they are likely to become the required specifications in the near future.

Incorporating Universal Design

Universal access or universal design takes the ADA a step further. When incorporated, universal design increases the usability of your facility for the broader population—younger, older, tall, short, male, female, people with and without disabilities. All people benefit from universal design. Larger bathroom stalls, a necessity for people who use wheelchairs, make it easier for parents with small children and older adults. Exercise equipment with small weight increments is easier for someone with limited strength and is safer for someone who is just starting to exercise.

Some Universal Design Features and Practices

Weather protection at entrance doors

Power door openers at exterior entrances

Extra space at the end of a row of exercise equipment

Extra chairs to accommodate persons who would like to participate in aerobics while seated

At least one TTY telephone available for use by people who are deaf or have difficulty speaking

Staff awareness and training in the use of the National Telephone Relay System

Uncluttered pool decks safe for people who have low vision or are blind, as well as for people using mobility aids

Surfacing material with a different texture on a pool deck several feet away from the edge of the water so someone with low vision may detect their relationship to the pool edge by the feel of the surface material underfoot

An aquatic wheelchair (bearings, etc., protected from corrosion) for use at pools with a sloped or wet-ramp entry

More than one accessible toilet and changing room, some left-handed and some right-handed (especially in larger facilities)

Awareness and sensitivity training for all staff and professional personnel about interacting with people with disabilities

Written materials and contracts available in large print or on audiocassette, for members who have vision disabilities

Guidelines for Creating Accessible Spaces in Fitness Facilities

The illustrations in this guide are based on the requirements in the ADA Standards for Accessible Design, the federal specifications for making buildings and facilities accessible under the ADA. Some of the illustrations in this book include designs from the Access Board's proposed Guidelines for Recreation Facilities. Many of the illustrations also highlight universal design features.



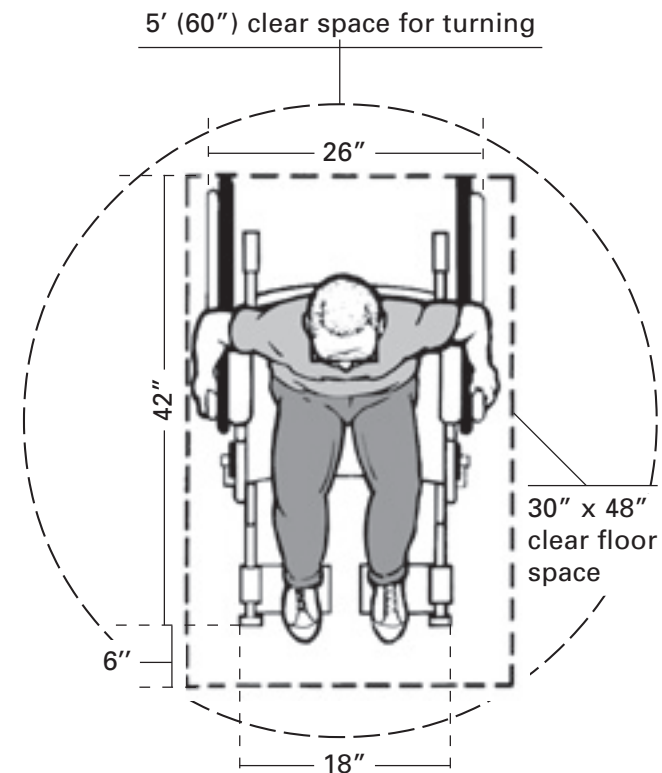
Issues of Space

(see figure 1)

An important feature that makes it possible for a person using a wheelchair, scooter, or other mobility aid to maneuver around independently is an **accessible route**. Without it your facility will not be usable by many people. An accessible route is a clear path at least 36 inches wide with no steps or stairs that goes from the parking lot into the building and to and through all the areas, including toilet rooms, shower areas, lockers rooms, and exercise areas. Accessible routes are identified in the illustrations in this publication and are required by the ADA.

In addition, a **30-inch by 48-inch clear floor space** is specified in the ADA design standards. Functionally, someone using a compact sports wheelchair may use a little less space, while someone in a scooter needs a little more floor space. The width and location of the accessible route and the placement of the clear floor and turning areas are important and should be considered when planning how and which pieces of equipment someone using a mobility aid might use. A little additional space is also needed for someone in a wheelchair or scooter to turn around; the minimum amount is a circle with a 60-inch diameter.

Figure 1. Space Allowances and Approximate Dimensions of Adult-Sized Wheelchairs



Entrance Areas

(see figures 2 and 3)

When parking is provided, some of the spaces must be accessible to both cars and vans. If only one accessible parking space is provided, it must be a van-accessible space. The van space with its larger access aisle works well for drivers with mobility disabilities who use some type of assistive device and need a little extra room to get in and out of their cars or vans. A wide access aisle for spaces is a feature of all accessible buildings and facilities. This can often be achieved by designating an existing parking space as an access aisle between two parking spaces for people with disabilities. It is important to include curb cuts if necessary and evaluate the adequacy of the accessible route.

Building entrances should have a smooth transition from the parking lot to the building interior. Entrance doors must be wide, have adequate space for maneuvering, and be easy to open. A power door operator greatly assists people using wheelchairs, walkers, or crutches. Often people using such mobility devices are unable to hold onto the door handle and move backward to pull the door open because they use their hands for mobility.

The reception area should be spacious enough to allow comfortable maneuvering by more than one person using a mobility device. Spaces and features provided for other people also should be made available to people with disabilities.

Figure 2. Fitness Facility Entrance

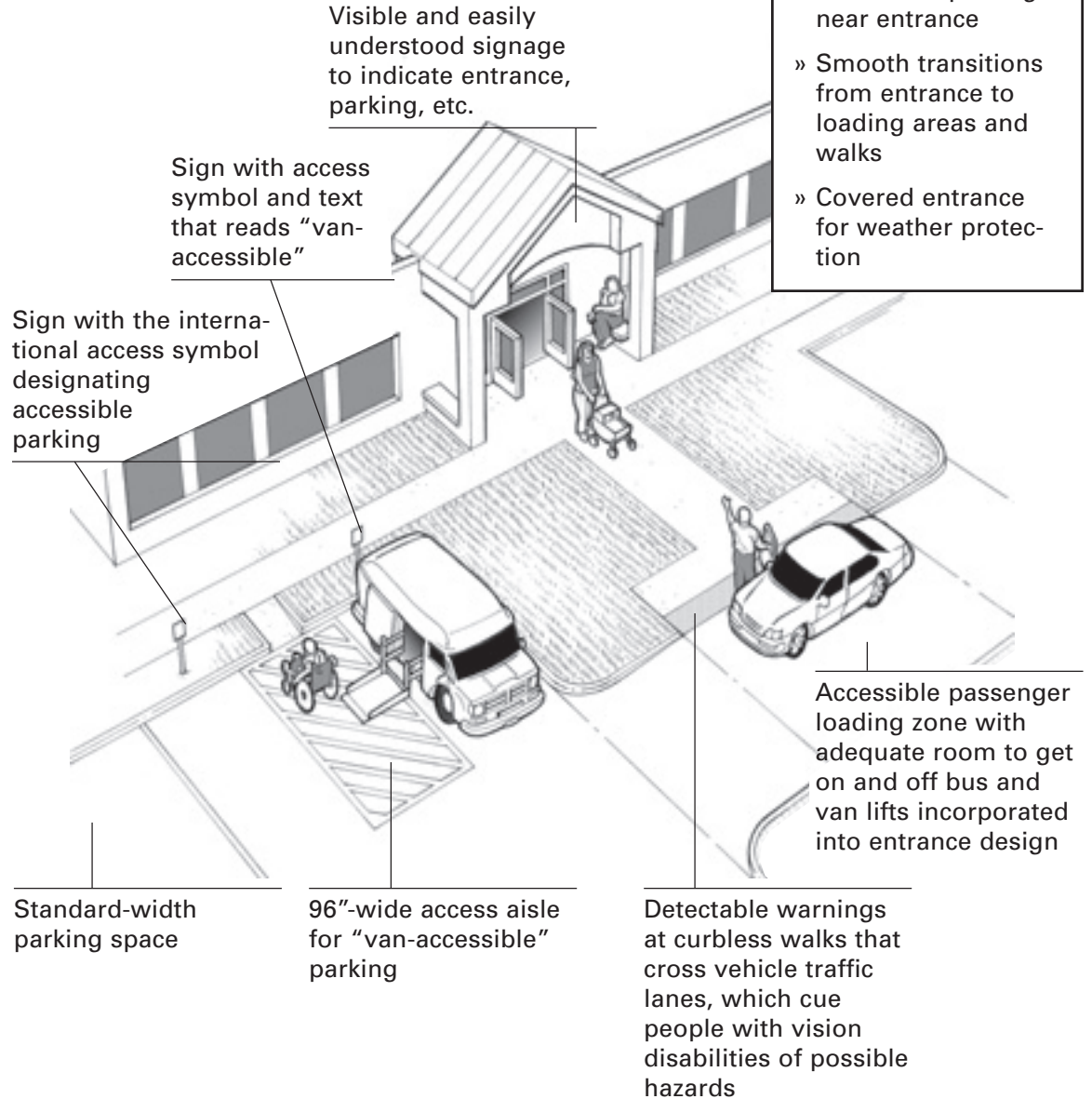
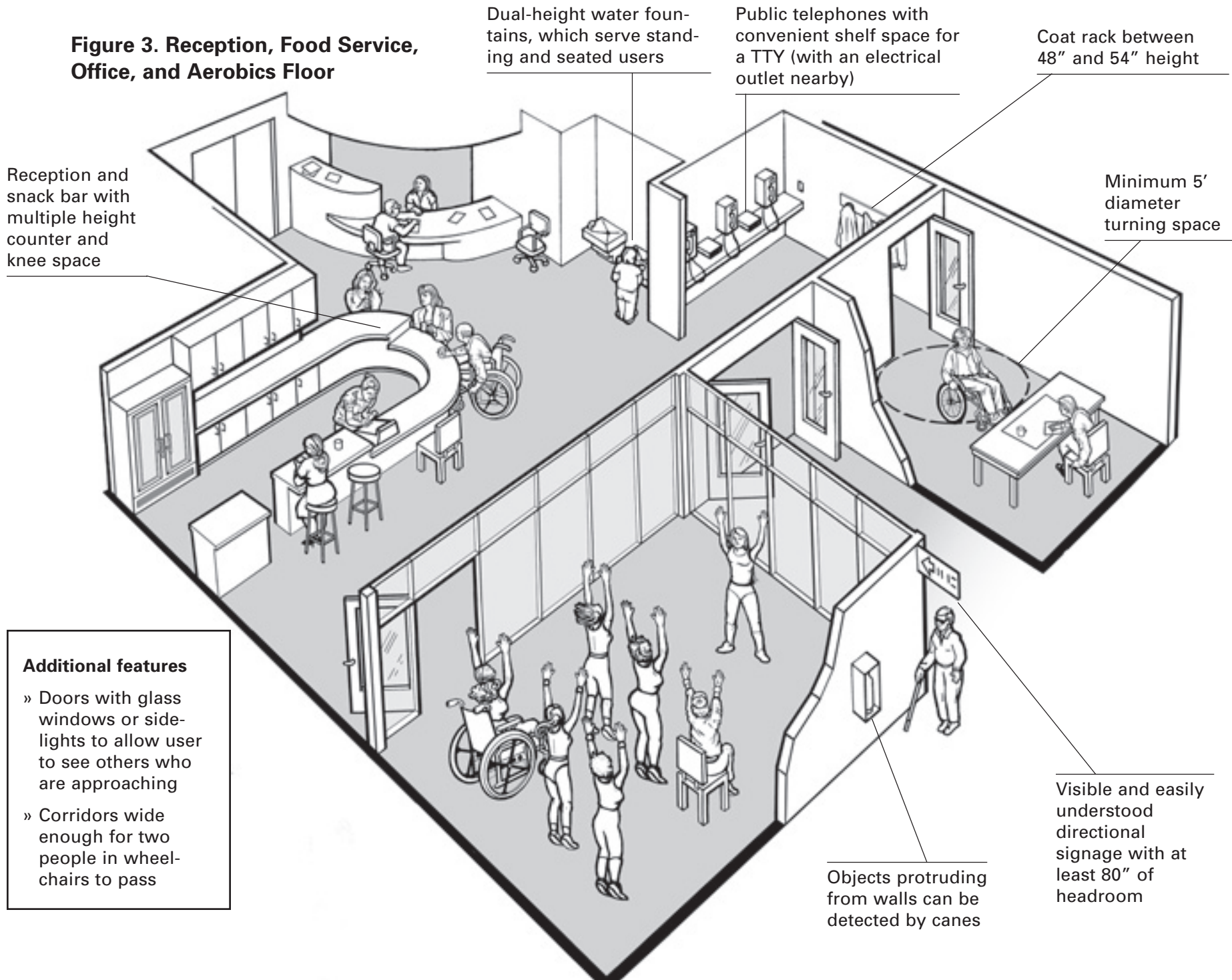


Figure 3. Reception, Food Service, Office, and Aerobics Floor



Locker and Dressing Rooms (see figures 4 and 5)

Like other spaces in a fitness facility, an accessible route must go to and through the locker room, showers, and other features such as saunas and steam rooms. Wherever dressing or changing rooms are provided, at least 5 percent (or a minimum of one room) must be accessible. Wherever dressing areas that serve different genders are provided, each area with its own cluster of changing rooms must have at least one accessible dressing room. The main points of the requirements are shown in the accompanying illustration and include clear floor space for a parallel approach to a bench that is **24 inches deep and 48 inches long**.

Figure 4. Dressing Room

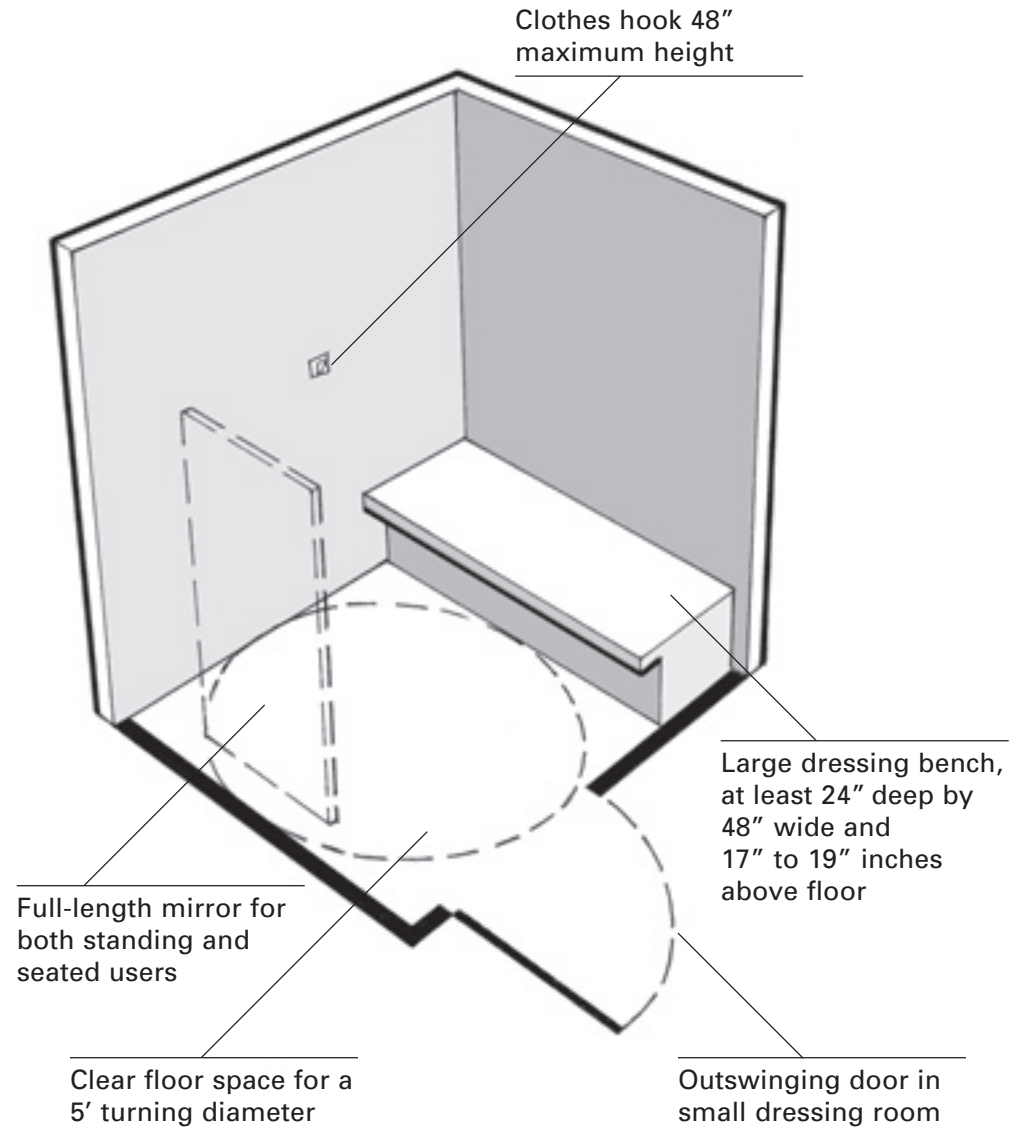
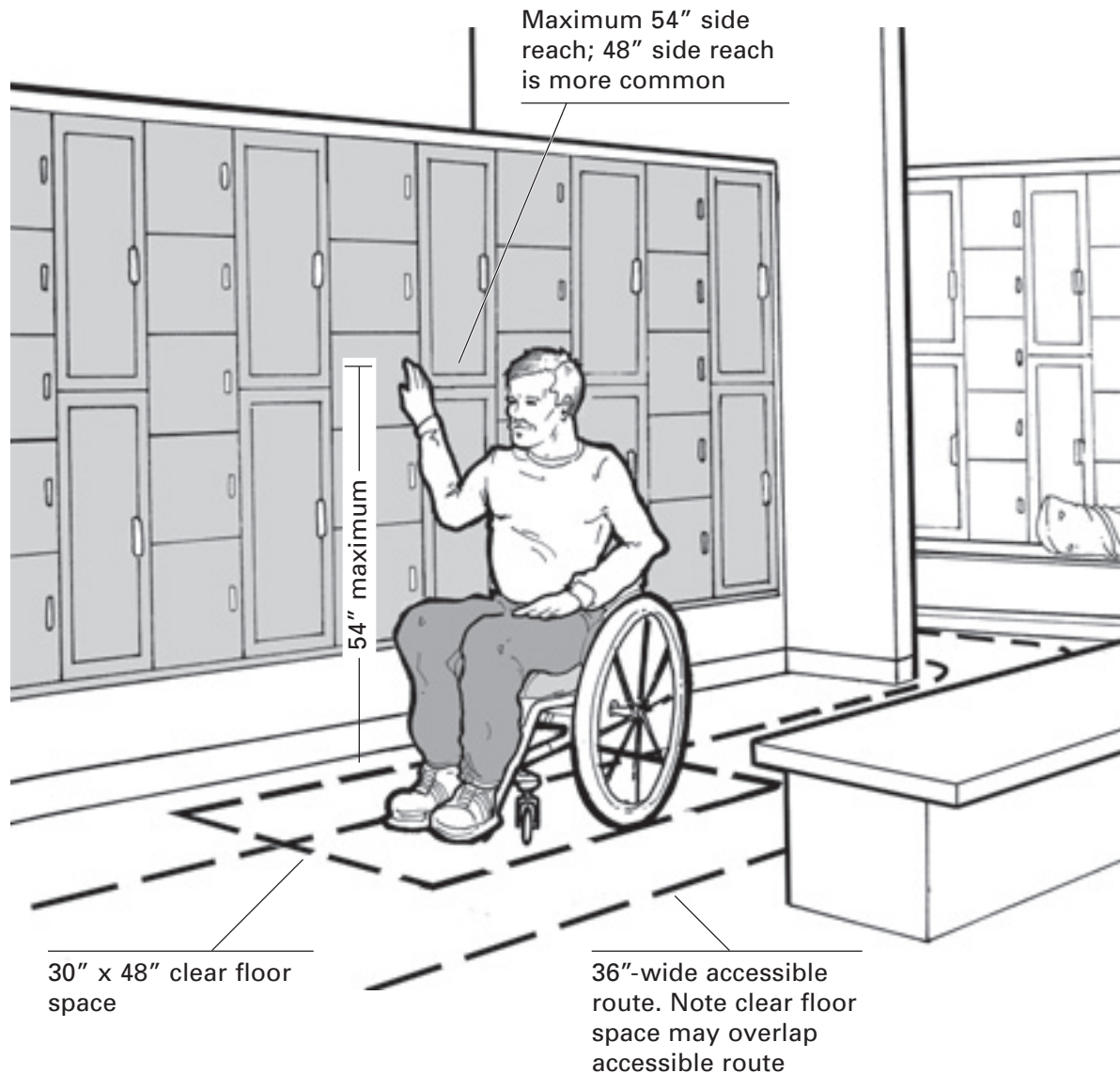


Figure 5. Accessible Lockers



At least 5 percent of each type of locker provided must be accessible: the lockers must be within reach of a seated person and have easy-to-operate handles or latches that do not require pinching and grasping to operate. Where saunas or steam rooms are provided singly or in a cluster, 5 percent (but not less than one) of the rooms for each type in each cluster must be accessible. For guidance on making saunas and steam rooms accessible, review the requirements for dressing/ changing rooms (on page 14) and be sure that the space for a turning circle is included. Lightweight seats that can be removed easily may temporarily obstruct turning space.

Bench should not encroach on accessible route or clear floor space

Toilet Rooms

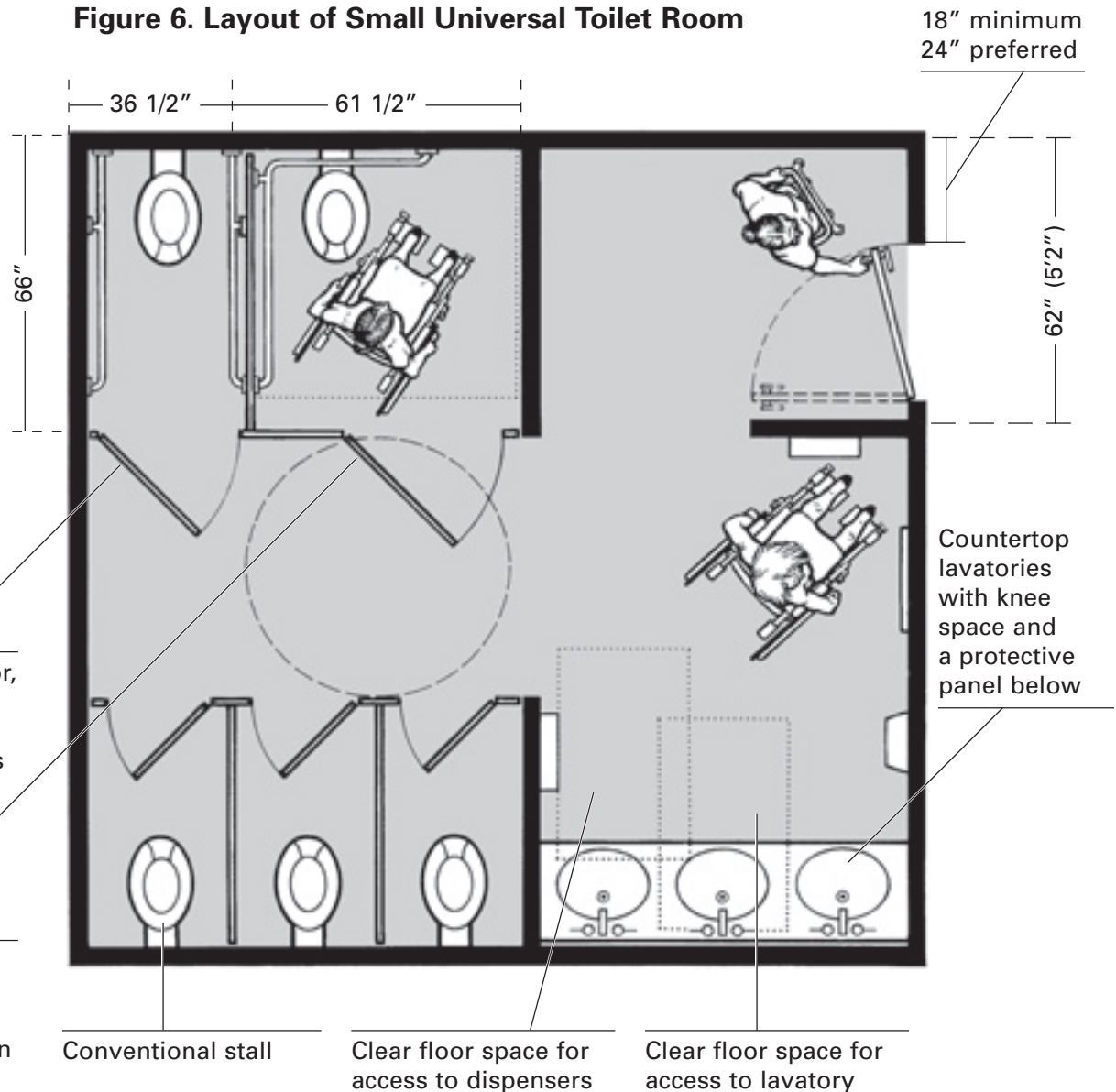
(see figures 6, 7, and 8)

All public and common-use toilet rooms must be accessible and on an accessible route. At least one, and sometimes more, of any fixture type provided must be accessible. In existing very small fitness facilities, where it is not possible to create a fully accessible toilet stall in both the men's and women's restrooms, a single-user unisex toilet room could be installed. These small toilet rooms benefit people who use attendants or family members of the opposite sex to assist with transfers.

Figure 6. Layout of Small Universal Toilet Room

36"-wide stall with outswinging door, which is required only if there are six or more stalls in the toilet room. The 36"-wide stall is included in this plan, and is shown lengthened to create a more universally usable toilet room.

Enlarged standard stall. The minimum allowable size for a standard stall with wall-mounted fixtures is 60" wide x 56" deep. The stall shown here has been enlarged slightly, especially in depth, to increase its usability.



Conventional stall

Clear floor space for access to dispensers

Clear floor space for access to lavatory

18" minimum
24" preferred

Countertop lavatories with knee space and a protective panel below

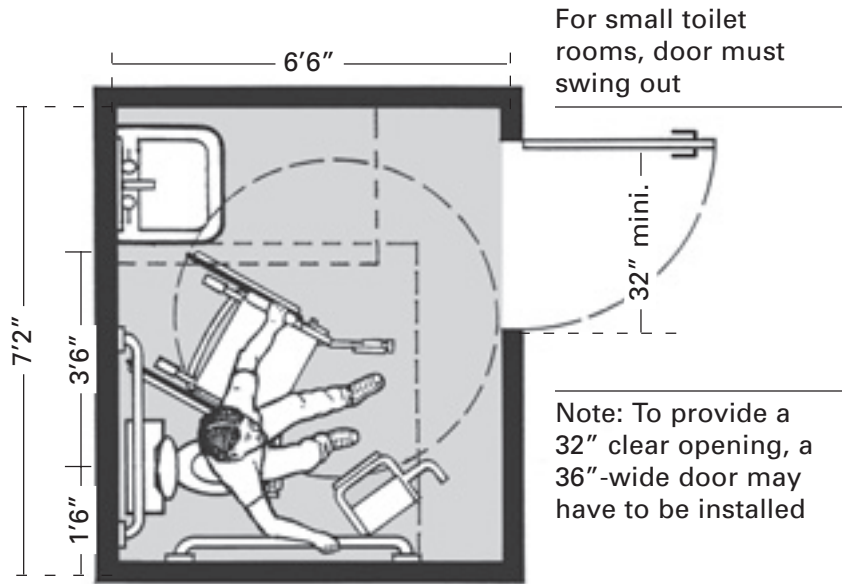
62" (5'2")

66"

36 1/2"

61 1/2"

Figure 7. Recommended Minimum-Sized Unisex Toilet

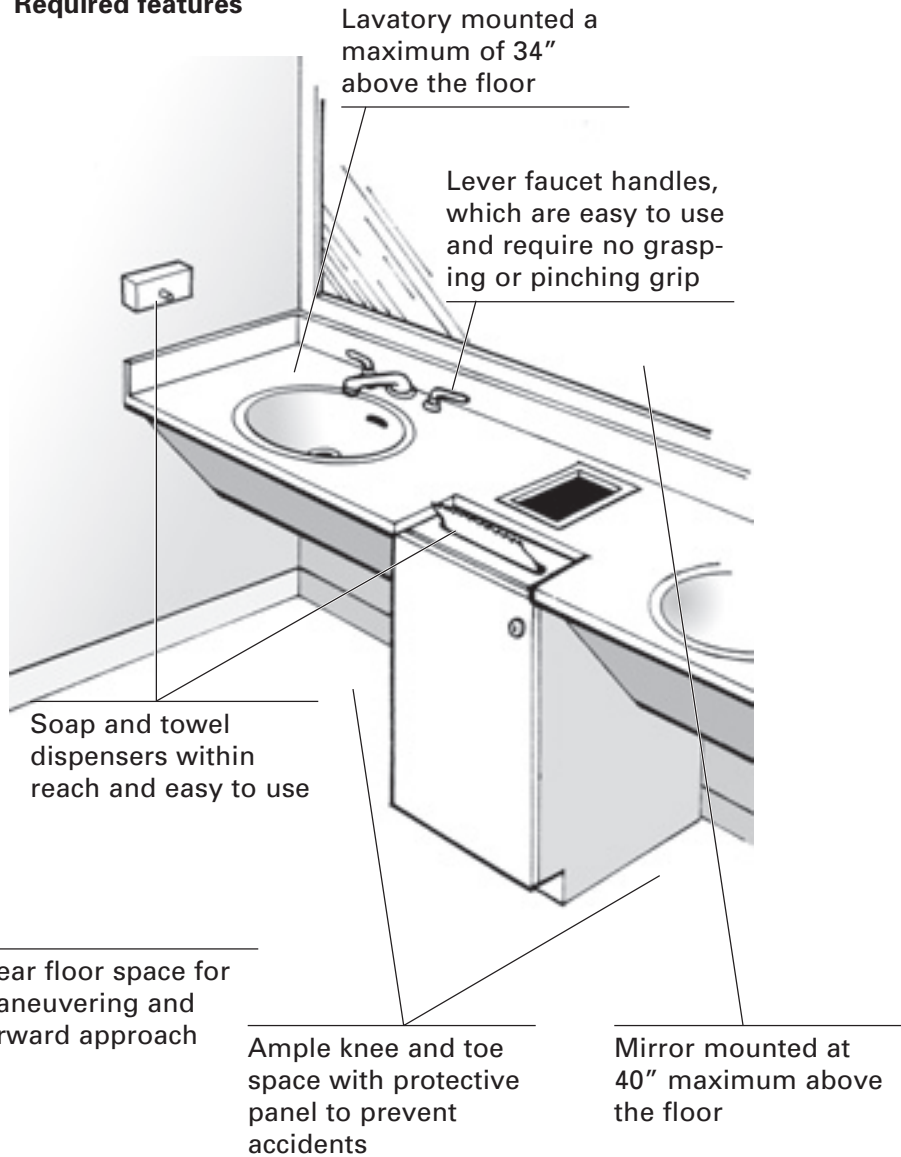


Additional universal features of ideal lavatory

- » Basin installed as close as possible to front edge of counter to minimize reach to faucet controls
- » Drain located at back of basin to minimize obstruction of knee space
- » Countertop that provides ample space for resting grooming items
- » Built-in trash receptacle, which provides maximum clear floor space
- » Thermostatically controlled faucets, which are safer to use
- » Only one lavatory (sink) is required to be accessible. However, to improve aesthetics and expand usability, all lavatories are treated alike

Figure 8. Ideal Lavatory Configuration

Required features



Showers (see figure 9)

Due to space constraints in most fitness facilities, shower areas usually consist of a series of small shower stalls. The illustration shows a 3'0" square transfer shower stall that is usable by a wide range of people. A note of caution: each feature and dimension has been carefully developed and is critical to the shower's success; no aspect of the design should be altered.

Figure 9. 3'0" x 3'0" Transfer Shower Usable by Most People

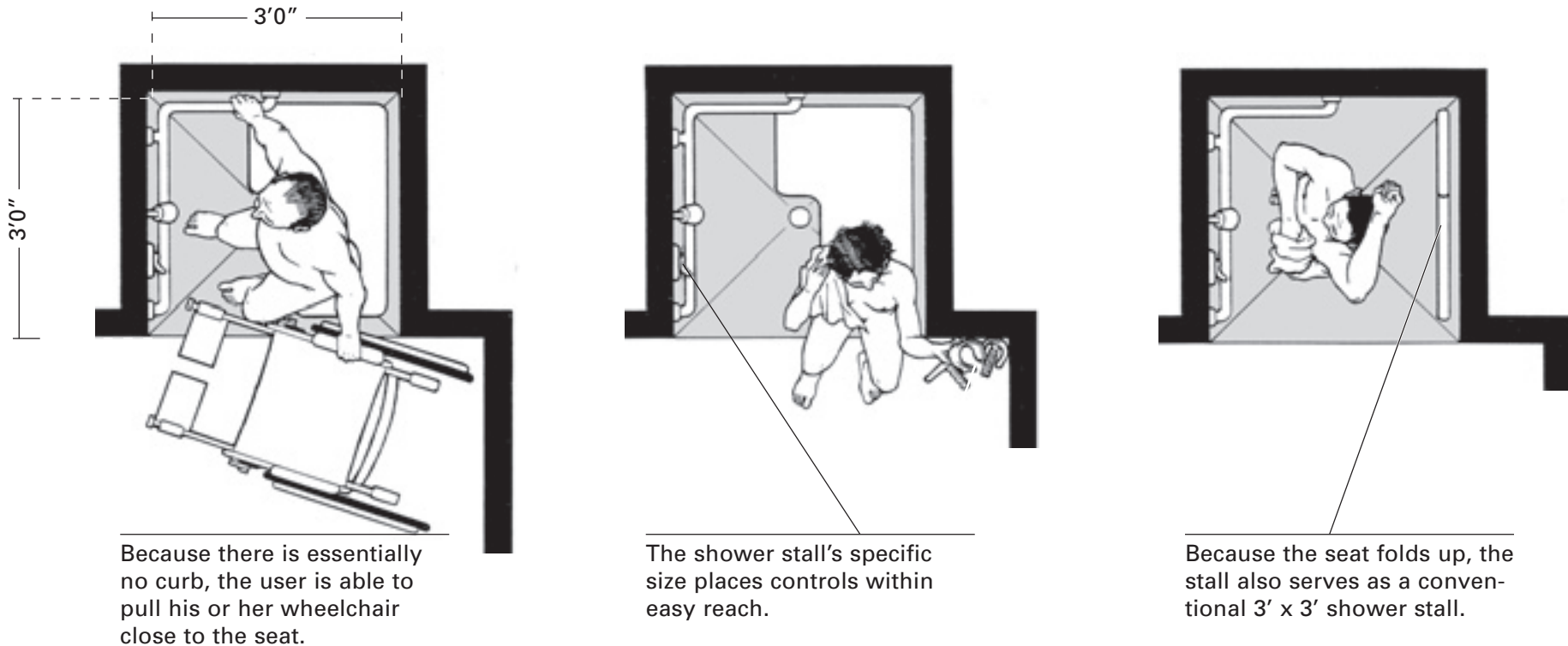
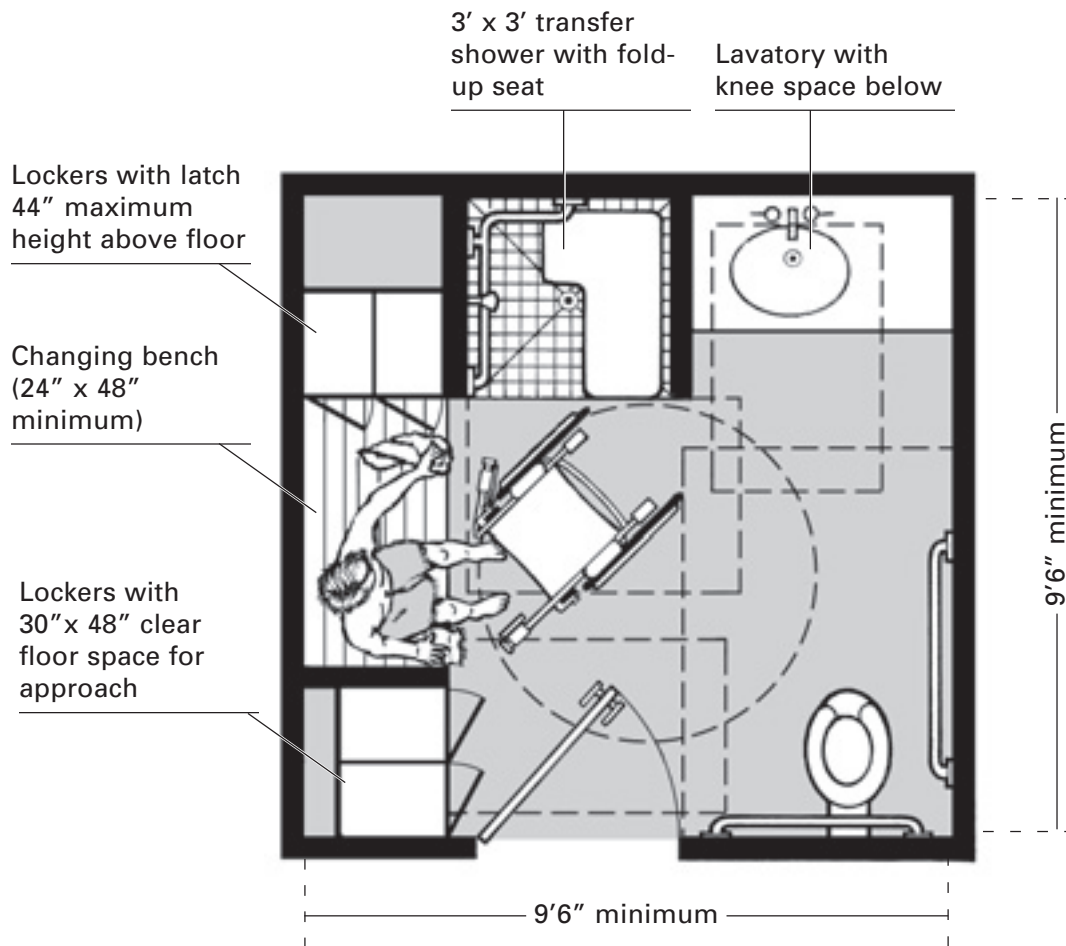


Figure 10. Family Changing Room



Family Changing Room, a Universal Feature
(see figure 10)

In many existing facilities, especially smaller ones, it may be difficult to provide a fully accessible toilet, shower, locker, and dressing or changing area within the same areas used by other members. The alternative is to create a unisex or “family changing room.” The family changing room has all the features and elements necessary for a person using a mobility aid to maneuver and safely change, shower, transfer on and off the toilet, and store clothes as necessary. Such a room can also accommodate parents who would otherwise have to take their children of the opposite sex into designated men’s or women’s locker rooms. It also allows someone to assist without causing discomfort to themselves, their companion, or other club members, a person of the opposite sex who may be older or who has a disability. In all newly constructed facilities, it is strongly encouraged that this universal “family changing room” be included in addition to the required accessible locker rooms and changing and shower areas.

Fitness Areas

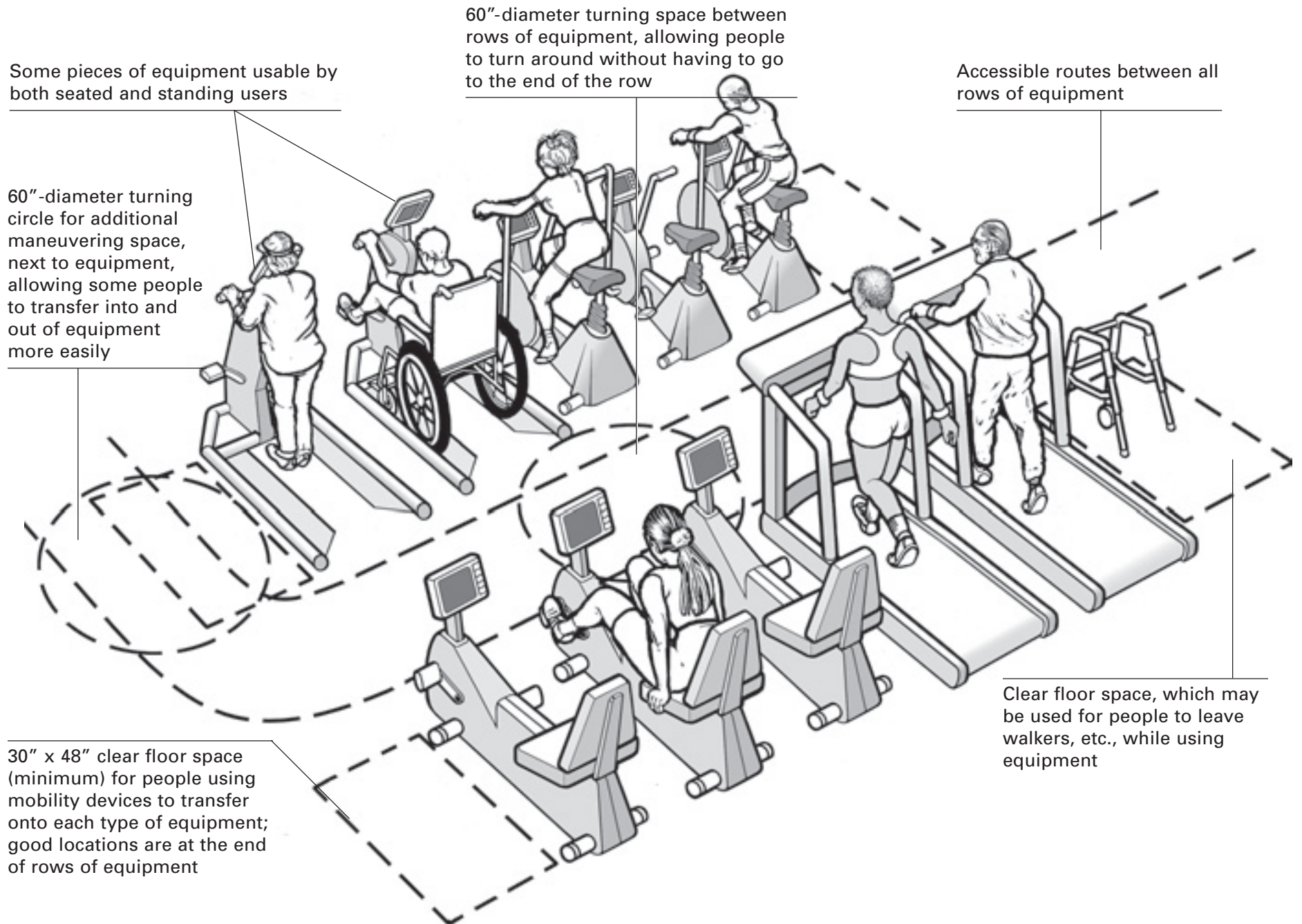
At least one of each type of equipment must be placed along the accessible route so it can be reached by someone who uses a wheelchair, walker, or just needs a little extra space to move around. The smallest possible space for a person in a wheelchair or scooter to position themselves beside a piece of exercise equipment is an area 30 inches by 48 inches. But for a person to be able to maneuver into a position that allows a safe transfer best suited to their individual style, a little more space is often necessary. This should be provided wherever possible.

Placement of Cardiovascular Equipment

(see figure 11)

Most fitness facilities have rows of treadmills, exercise bikes, and other cardiovascular exercise equipment grouped, usually very close together. Many people with disabilities can use much of this equipment; but given the space restriction between pieces of equipment, access is often difficult, if not impossible. Although it is ideal to have 36 inches of clear floor space between each piece of equipment, this may not be possible. Often the simplest strategy is to locate one of each type of equipment at the end of a row along the accessible route. A rule of thumb is to plan a circle 60 inches in diameter beside the exercise equipment with the circle overlapping the accessible route. If a person's wheelchair is parked perpendicularly to a piece of equipment, it is important that other people be able to pass by.

Figure 11. Placement of Cardiovascular Equipment



Placement of Strength Training Equipment

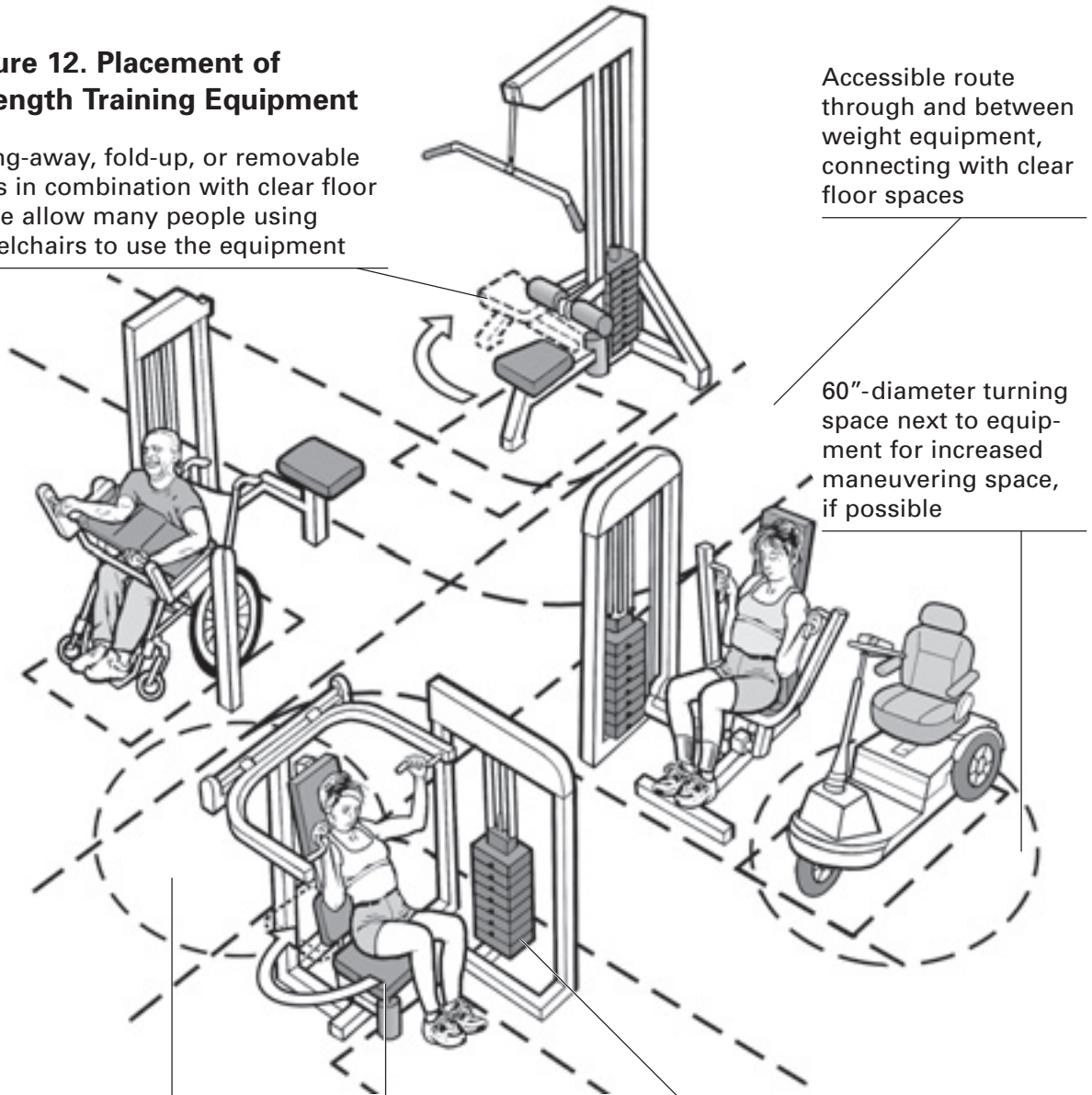
(see figure 12)

A person who uses a wheelchair, walker, or other mobility aid needs adequate space to maneuver close to the seat and to be able to reach weights and other adjustment features. It is important that any stand-alone equipment used for strength training have adequate space on *all* sides of the equipment. The minimum space is 36 inches, but this is often not sufficient for many people. If possible, provide more than 36 inches—preferably 48 inches—of clear floor area perpendicular to the equipment on any side where a person may transfer or may be required to reach adjusting pins or controls while still seated in their wheelchair. Note, some people prefer to transfer from their right, while others from the left, and they may take an angled approach to better position themselves for a safe transfer.

Note: Even when the seat of a piece of equipment cannot be removed or adjusted, providing clear floor space next to the equipment allows many people using mobility devices to transfer onto the seat and use the equipment.

Figure 12. Placement of Strength Training Equipment

Swing-away, fold-up, or removable seats in combination with clear floor space allow many people using wheelchairs to use the equipment



Accessible route through and between weight equipment, connecting with clear floor spaces

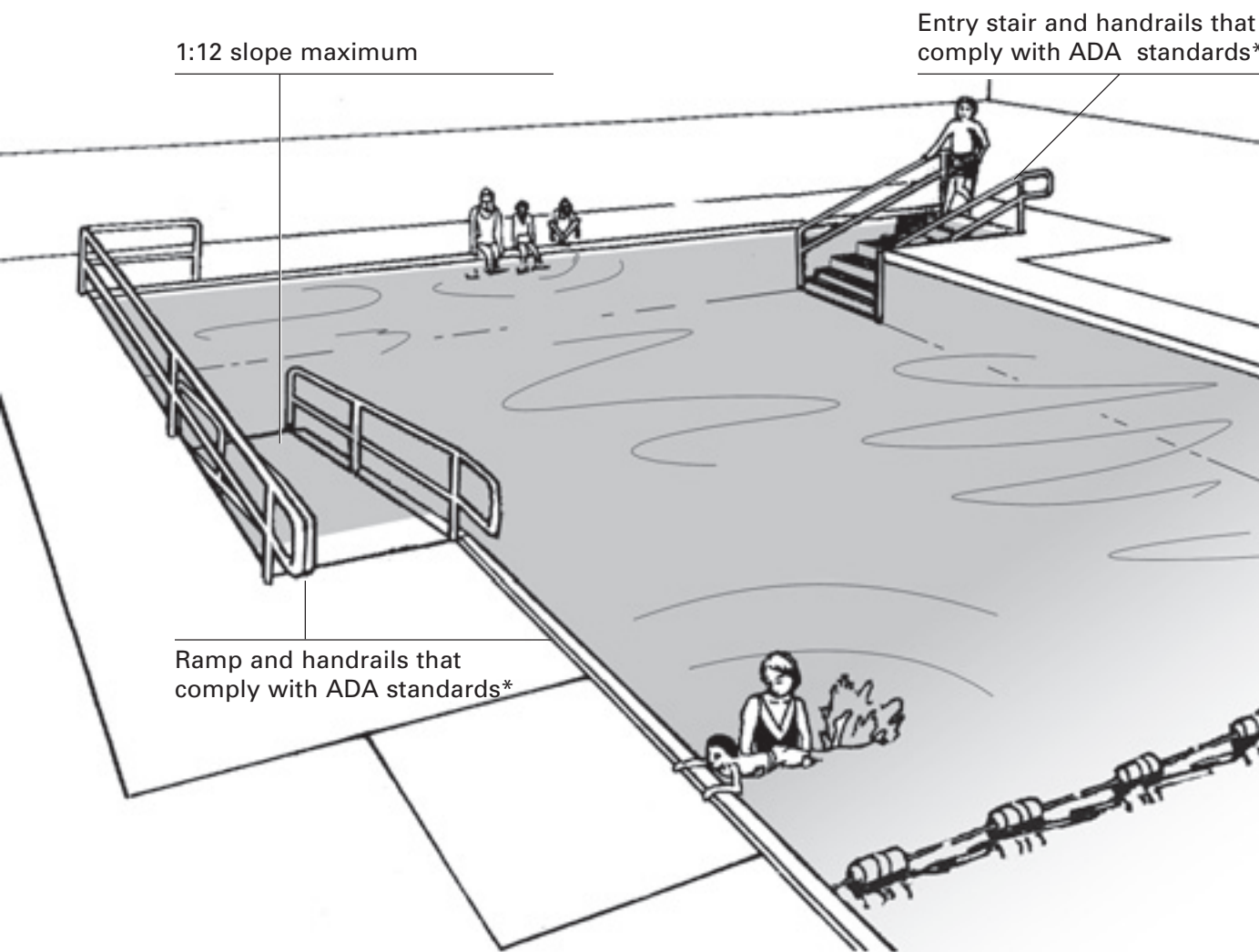
60"-diameter turning space next to equipment for increased maneuvering space, if possible

60"-diameter clear turning spaces, located intermittently along accessible routes

Seats that swing away and are height-adjustable

Weight instrument pins within reach of people using wheelchairs or scooters

Figure 13. Sloped Entry and Stairs at Swimming Pools



*Exception: Handrails should not extend beyond the base of stairs or a ramp where such would protrude into a lane or otherwise programmable area, in accordance with the Access Board’s proposed guidelines for recreation facilities.

Pool and Spas

(see figures 13, 14, 15, and 16)

For those fitness facilities with pools, the accessible route must go to and around the pool area. There are several ways to make the pool itself safe and comfortable for all people to enter and enjoy. The illustrations highlight some features that can be added without significant cost to an existing pool to increase accessibility. Other methods are shown that are more appropriate for new construction.

The current methods for creating accessible pools include:

- » pool lifts
- » transfer system (sometimes called transfer steps or transfer tiers)
- » pool stairs
- » sloped entry
 - » zero-depth entry or wet ramp
 - » dry ramp that takes users to a point at which they can sit on a transfer wall
- » transfer walls
- » movable floors (This method is somewhat more elaborate and is not shown in this book.)

At least one accessible means of water entry/exit should be provided for each pool. When only one accessible means is provided, it should be a swimming pool lift or sloped entry (wet ramp). Swimming pools with more than 300 linear feet of pool wall should have at least two accessible means (and not of the same type) of entry/exit. Spas should have at least one accessible means of entry, such as a lift, transfer wall, or transfer system. Whirlpools should also have an accessible means of entry and exit.

For more information on pool accessibility contact the National Center on Accessibility (NCA) and request the 2001 report prepared by the NCA on the Access Board’s recreation guidelines for pool accessibility. See Resources on page 36.

For fitness facilities built after 1992, the effective date for new construction under the ADA, pools must have accessible means for entering and exiting the water. For facilities constructed before 1992, under Title III, “readily achievable” removal of barriers is permissible and installing a pool lift would fall into this category. Under Title II, programs must be accessible and every effort must be taken to make a pool accessible.

Figure 14. Pool Lift (lift or transfer system easiest to install in existing facility)

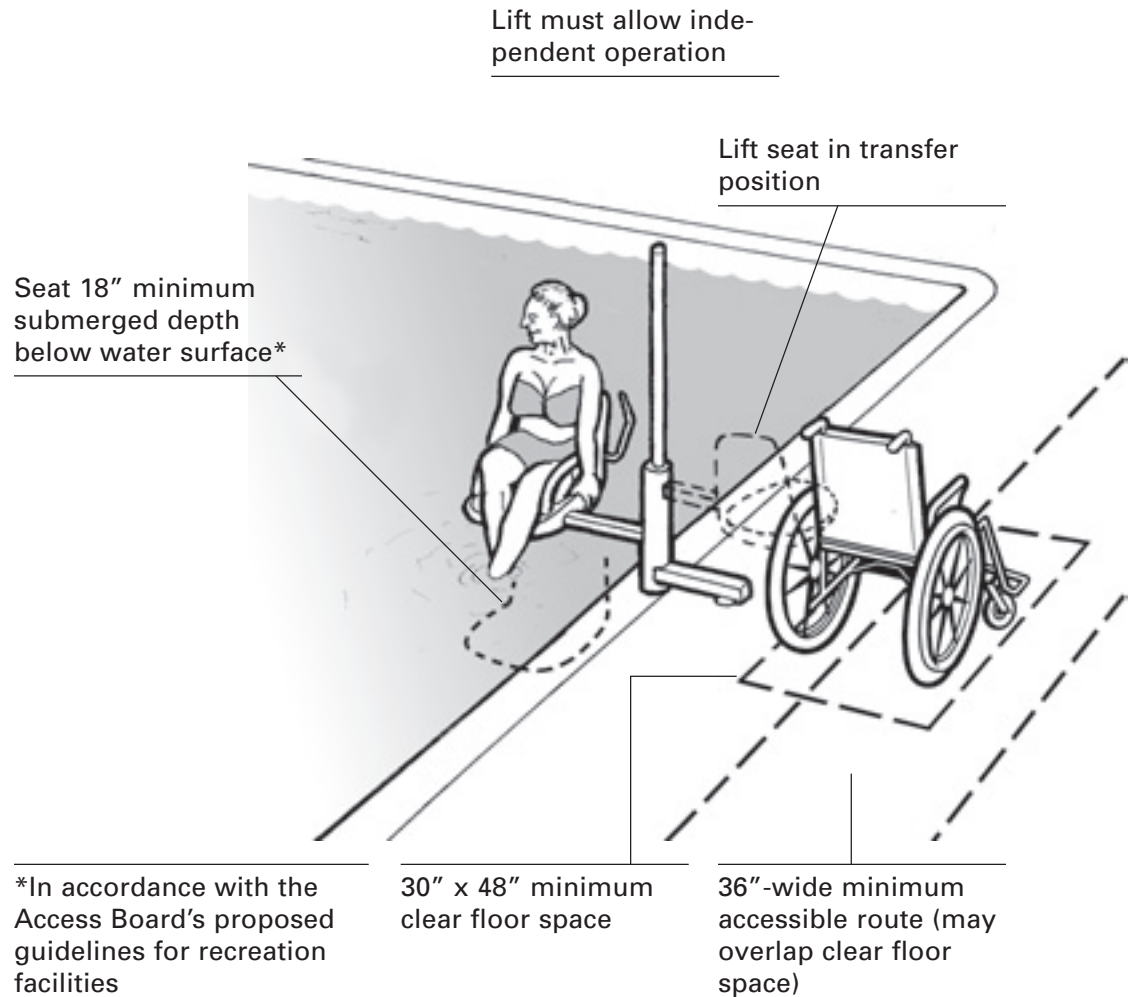
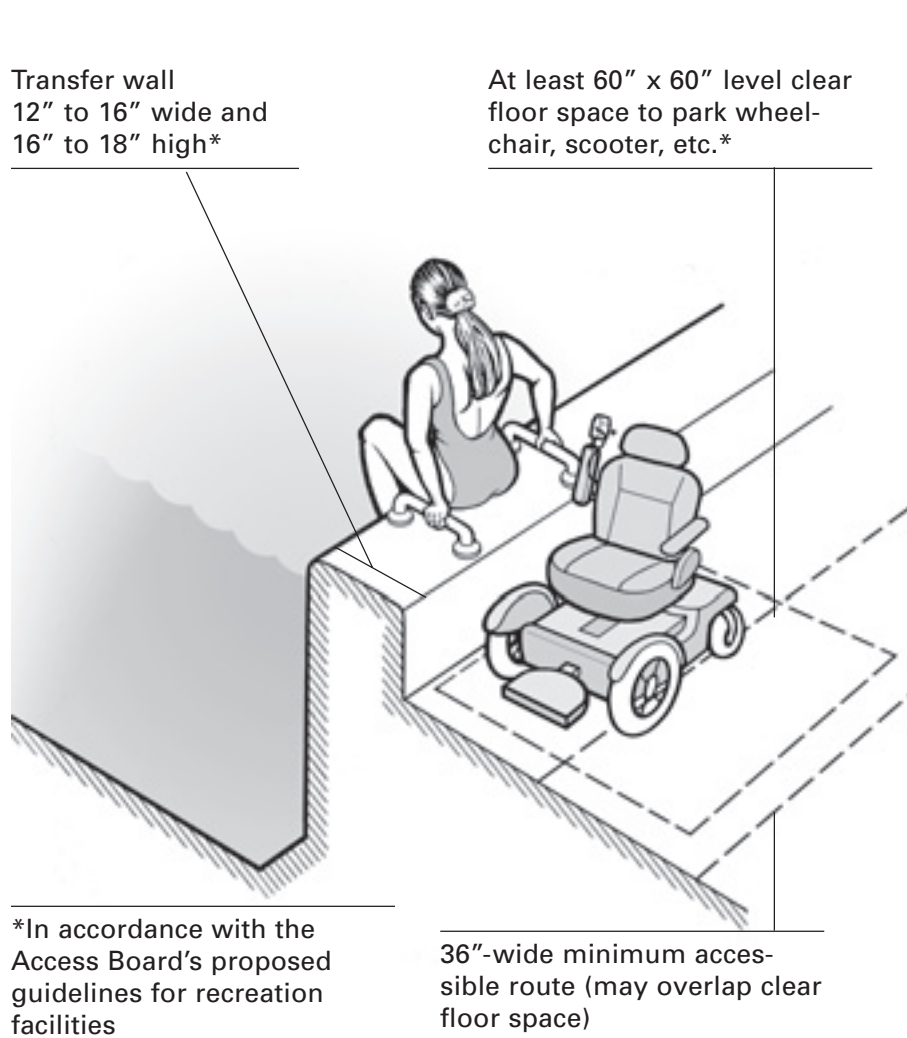
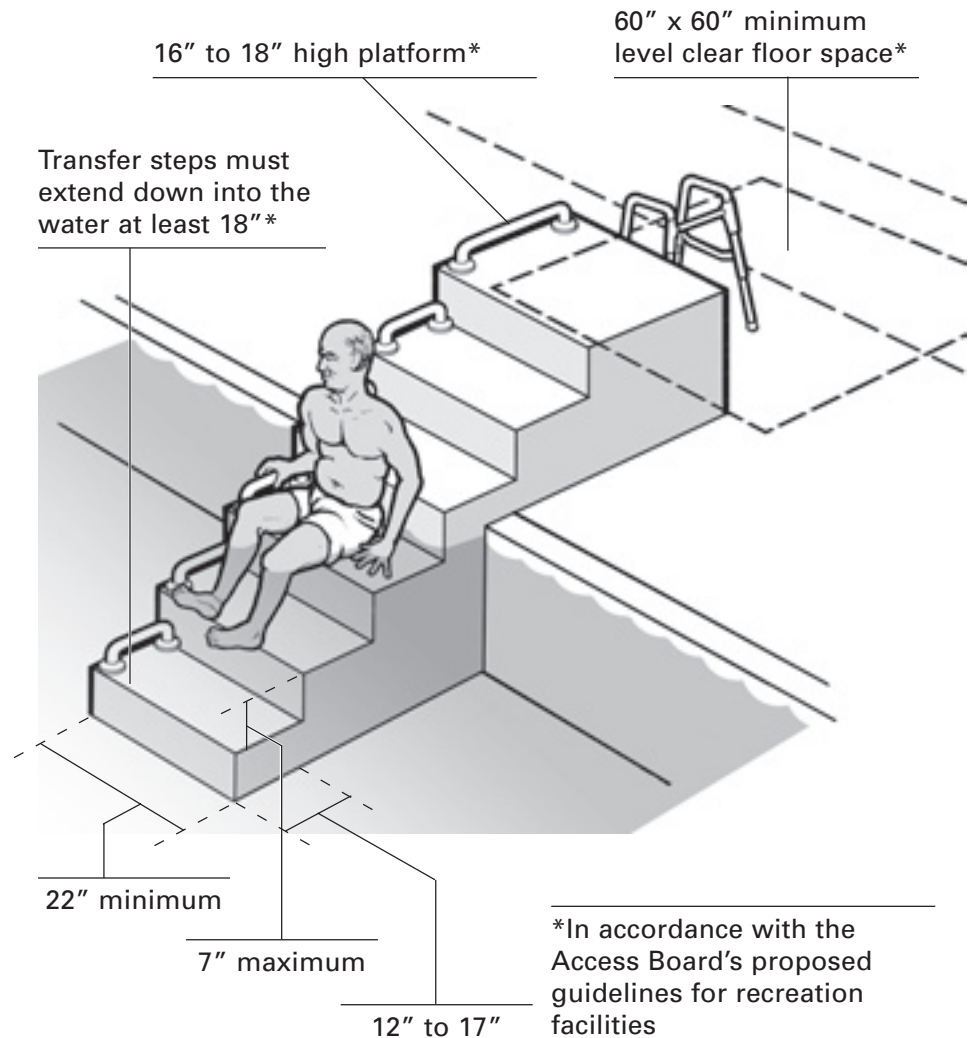


Figure 15. Transfer Wall



**Figure 16. Transfer System (lift or transfer system
easiest to install in existing facility)**





Guidelines for Selecting Equipment

Your building may be accessible; but if the equipment is not usable by people with a variety of physical ability levels, the program does not meet their needs. Look closely at your current equipment or plans to update or add more equipment and consider how your selections can meet a broader range of abilities.

Usability of Exercise Equipment

The design of the equipment you purchase is critical to a successful exercise experience for people with disabilities. You cannot assume that equipment available from many of the popular manufacturers is usable by everyone. Some mainstream equipment has the flexibility to make it usable by people with a wide range of ability levels, but it is important to know what to look for. In addition, there are a number of companies that specialize in “adaptive” exercise equipment that can often be used by any member with or without a disability. Consider the following recommendations when purchasing new equipment that will benefit members of all ability levels.

Strength Training Equipment

- » Look for equipment companies that offer a **swing away seat** allowing everyone to use the same piece of equipment. A person in a wheelchair, then, has the option of transferring onto the seat provided or remaining in their wheelchair. At the present time, the Pulse Fitness System's Access Line is the only brand of equipment known to offer this feature.
- » Look for equipment with **small weight increments**. Resistance should start near zero and should have 1- to 2-pound increments. Also, consider electromagnetic or pneumatic resistance, which uses buttons instead of pins to change settings. Buttons or pins should always be within easy reach of the user.
- » **Equipment should be easy to enter and exit**, especially if seats and benches are not removable. Make sure padding or stability bars do not get in the way of or prevent a transfer from a wheelchair onto the equipment seat or bench.
- » **Wider seats and benches** are important for people who need a little extra surface to maintain balance.
- » Consider **multistation equipment** that is accessible to someone who uses a wheelchair. This offers a wide range of resistance activities in a small space. Anyone can use the equipment by simply placing a chair or bench in the space designed for a wheelchair.
- » **Wall pulleys** are an inexpensive way to provide exercise equipment for people who may not be able to transfer onto and use traditional exercise equipment. Mounting height should be 36" to 48".



Courtesy Sinites SciFit, Inc.



Courtesy Helm Distributing, Inc.



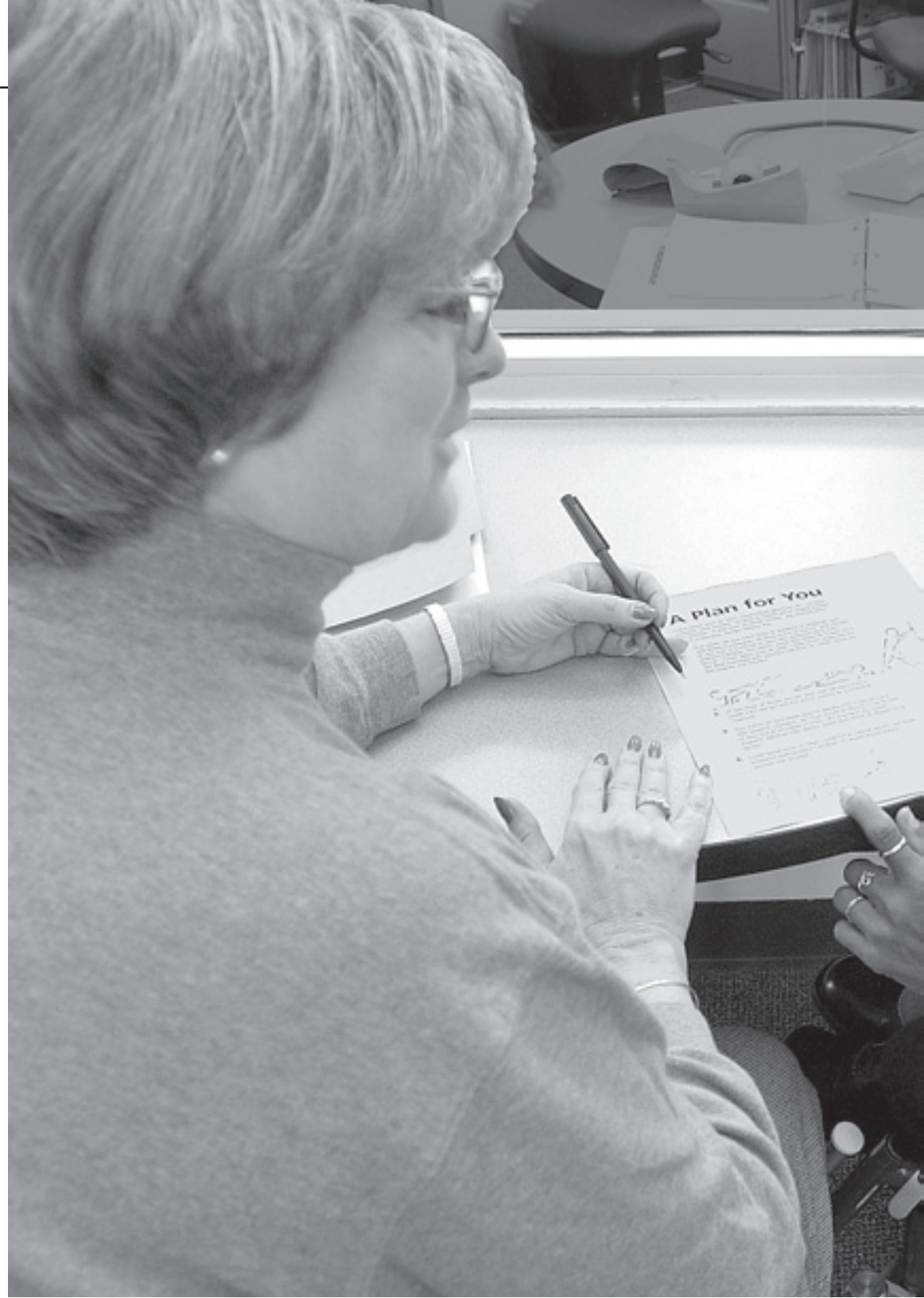
Courtesy Rand Scot, Inc.

Free Weights/Stretching Areas

- » Offer **different types of free weights**, including a variety of weights less than 5 pounds, and **cuff weights** for those with limited grip.
- » Consider a **raised “treatment table” or elevated mat** for above-the-floor stretching.

Cardiovascular Equipment

- » Offer **different types of exercise bikes**. Schwinn AirDyne and recumbent bikes can augment traditional exercise bikes.
- » Look at **equipment that provides exercise for both arms and legs**, either separately or at the same time. Nu-Step Recumbent Stepper is a piece of equipment that can be used by someone with reduced strength.
- » Be sure **treadmills have a low MPH setting** and start very slowly. This allows users to set their own pace and benefit from weight-bearing exercise.
- » Offer an **upper arm ergometer**. Fitness trainers have long recognized that they provide a valuable cardiovascular upper body workout for anyone. This is especially important for people with a temporary or long-term disability. This is one of the best ways to get good cardiovascular exercise.





Recommendations for Assisting People with Disabilities

Getting Started

Not knowing how to assist someone with a disability with their exercise goals can be one of the biggest obstacles for fitness trainers and staff. Apply the same principles and considerations that you use with your general membership. Good form and body position, exercising safely and effectively, and knowing when to stop are important skills for everyone. Here are a few things to keep in mind when getting started:

- Establish open communication about abilities and limitations. Don't be afraid to ask questions, but always extend the same respect as you would any other member.
- Be willing to experiment with different equipment or modes of exercise, allowing the person to feel comfortable with their exercise capabilities.
- Be creative with adaptations to make existing equipment accessible and usable. See Adaptation Ideas on page 34.

If you or your staff have little experience working with people with a variety of disabilities, consider reviewing some information on disability awareness, and provide staff training. See Resources on page 36.

Medical Clearance, Screening, and Liability

Are people with disabilities more likely to be injured while exercising? The truth is there are risks for everyone. Most facilities will screen prospective members that may be at high risk for an “adverse event,” such as injury, heart attack, or stroke. If the staff are concerned about risks that may be experienced by a person with a disability, ask that person to discuss their abilities and limitations. In many cases, mere physical limitations are mistaken for serious disease or illness. It is important for anyone who has not been physically active, regardless of ability, to talk to his or her doctor before beginning an exercise program. Your established policy for filling out applications, health forms, and waivers needs to be the same for everyone.

Considerations for Different Disabilities

Most people with disabilities know their abilities and limitations: which muscles work, how well each muscle functions; which movements cause pain, fatigue, or other symptoms; and which activities or exercises are feasible. More specific information can be obtained through reference books listed in Resources on page 36. In addition, consider consulting physical, occupational, or recreational therapists, adapted physical education teachers, or disability sports coaches.

The following list of issues and considerations are related to general disability categories. Disabilities are very individual in nature, and this list is merely designed as a place to start.

Physical Disabilities

- There is a wide range of causes and degrees of involvement of physical disabilities. Consider each individual’s abilities and level of functioning.
- Do not remove crutches, walker, wheelchair, cane, braces, or prosthetic device (artificial limb) without permission.
- Wheelchair users may or may not be able to transfer to and from exercise equipment independently. Ask the individual what kind of assistance is preferred.
- Be aware that balance, postural stability, gripping ability, joint or muscle contractures, and spasticity may need to be taken into consideration when exercising. In most cases adaptations can be made.

Learning/Cognitive Disabilities

- Many disabling conditions may not be apparent. These may involve cognitive or learning abilities and may affect understanding or communication. It is important to consider how information is presented. It may be necessary to break down directions into clear, easy-to-follow statements.
- Allow plenty of time for the new member to learn and master a task. Repetition is important for learning.

Sensory or Communication Disabilities

- If a person has difficulty speaking, do not assume they have a cognitive impairment. Be patient and find out the best way for that person to communicate.
- There are varying degrees of vision loss, but most people can see a little. Make sure the person is familiar with the environment and orient them to new surroundings or changes in the environment.
- If an individual has hearing loss, find out the best way for them to communicate. An interpreter may be necessary for complex instruction if the person communicates with sign. In most cases, shouting doesn't help.
- When communication is difficult, a pad and pencil can often offer a simple solution.

For more information on exercise considerations for specific disabilities or health conditions, contact the National Center on Physical Activity and Disability. See Resources on page 36.

Exercise Assessment and Activities

Many facilities offer some kind of assessment and exercise plan when a new member joins. If a standardized assessment is used, it is important to keep in mind that no specific battery of tests or accepted test norms exists for adults with disabilities. Test scores should be used to chart progress over time for each individual,

Tips for Interacting with Persons with Disabilities

- » Always treat anyone with a disability with the same respect that you would extend to everyone else.
- » Use words that put the person first, referring to them as a "person with a disability" or "person with a hearing impairment." Avoid using words like "handicapped," "retarded," "crippled," "wheelchair bound," or "confined to a wheelchair."
- » Don't be afraid to offer assistance to a person with a disability if you feel like it, but wait until your offer is accepted before you help. Listen to any instructions that the individual gives about the best way to assist them.
- » When talking with a person who has a disability, speak directly to them rather than through a companion who may be with them.
- » As with anyone else, let a person with a disability make their own decisions regarding what they can or cannot do. Do not impose limitations on someone else's capabilities or interests. Be careful not to be overprotective.
- » Be considerate of the extra time it may take for a person with a disability to get things said or done. Let the person set the pace in talking and moving from place to place.
- » It's okay if you happen to use accepted, common expressions, such as "See you later" or "Got to be running along," that seem to relate to the person's disability.
- » Don't move a person's wheelchair out of reach without their permission if they have transferred onto a piece of equipment. A person's wheelchair can be considered an extension of their body and should be treated as such.

not for comparison between individuals. Use tests that the individual can perform successfully. Write down the exact procedures for the tests performed and repeat tests periodically.

Suggested Activities

As you would do for anyone starting an exercise program, take time to match suggested activities to the individual's needs, goals, and interest areas. A balanced program designed to improve joint flexibility, muscular strength and endurance, and cardiovascular endurance is the best approach for everyone. Be creative and adjust the kinds of activities or ways they are performed to suit individual needs and abilities. No one activity is particularly appropriate or inappropriate for anyone with a disability. Most activities can be adapted to meet individual needs and to accommodate individual differences. The accompanying sidebar offers you a start with a list of possible activities that your general membership, including people with disabilities and older adults, can do.

Activities for All Ability Levels

Weight Training

- » free weights – high and low resistance (barbells, dumbbells, or cuff weights)
- » standard weight training equipment
- » multistation systems
- » rubber tubing or Thera-bands
- » pulley weights
- » medicine balls
- » own body weights (pull-ups, crunches)
- » manual resistance from partner

Movement Activities

- » seated or standing aerobics
- » yoga
- » martial arts
- » swimming
- » water aerobics
- » water resistance exercises
- » arm or leg ergometry
- » walking
- » wheeling in a wheelchair
- » stationary cycling
- » rowing on a machine

Stretching

- » passive stretching
- » active stretching

Making the Equipment Work

Matching User with Equipment

The use of exercise equipment depends on the accessibility and appropriateness of the equipment in your facility. The appropriateness of any one piece of equipment is **highly individual**. Trial and error may be the only way to determine its usefulness. Factors such as the user's grip strength, balance, coordination, body strength, and ability to transfer will affect these decisions. The following list provides some criteria to use when evaluating equipment in order to match the equipment with the user's abilities.

- Is the equipment designed for a muscle group that the user can control?
- Can the user sit on or otherwise access the machine? (See photos below showing a removable seat.)
- Do the seat and backrests have sufficient padding?
- Does the user have sufficient balance with or without additional straps to remain stable and use good form?
- Is the bench or seat wide enough to accommodate the user and to facilitate balance?
- If a person has only limited use of an arm or leg, can that limb be safely held in place while exercising?
- Can the user grasp the handle or bar with or without adaptations (Velcro straps, gloves, wrist cuffs)?
- Can the user reach to adjust weight?
- If necessary, can the user's feet be affixed to the foot pedals with straps, toe-clips, or Velcro?
- Can the user reach handles and foot pedals?
- Can the user perform at least one repetition of the exercise on lower resistance to receive benefit?



A removable or swing-away seat gives the user easy access to the equipment.

Adaptation Ideas

Although some types of equipment may be specialized for use by persons with specific disabilities, existing equipment can almost always be adapted. Simple and inexpensive adaptations can make your facility more usable for a wider range of ability levels. Using a cuff around the hand of someone with limited strength can allow him or her to grasp a bar or handle on equipment. An abdominal binder or weight belt used as a seat belt can provide the necessary stabilization for someone with limited balance.

To increase gripping ability

- » Cuffs, mitts, and splints can be used by people with weak hands or little grip strength. They can be used with free weights, lat pull machines, pulleys, or anything that requires gripping a bar or handle.

To stabilize limbs or feet

- » Straps or clips can be used to secure a person's foot to the pedal of an exercise bike.
- » For a person with limited use of specific limbs, straps with Velcro can hold the limb(s) stationary.

For extra balance

- » An adjustable webbed strap can be placed around the torso of a person and secured to a piece of the exercise equipment to provide extra balance.
- » Weight belts can be used for balance.

For extra padding

- » Dense foam can be cut into pieces and placed where needed to prevent rubbing and unwanted pressure.
- » Towels can be used for padding.



Consider the Opportunities

You have the opportunity to expand your consumer base and at the same time improve the health of people with disabilities and older adults in your community. Exercise can minimize osteoporosis in older adults. For a person with a disability, strength training can improve the ability to do everyday activities because of increased strength and endurance. You can help improve a person's commitment to exercise over the long-term, a commitment that helps to grow your business. You can create a positive fitness facility experience and help reduce the intimidation factor of exercise in general and of strength training in particular. You can create a usable, responsive, and inviting facility for all your members, regardless of current level of physical ability. You have the opportunity to set the standard for more usable fitness facilities.

Resources

This section lists many resources to help increase the accessibility of fitness facilities for people with disabilities. It includes the resources we have mentioned in this publication, as well as ideas of where to start when identifying individual needs.

Neither the North Carolina Office on Disability and Health, the Center for Universal Design, nor the author of this guide endorse any specific product listed below. They are listed only as sources of information that may be useful for some readers.



Americans with Disabilities Act and Universal Design

For information on the ADA Standards for Accessible Design, tax incentives, and other accessibility guidelines contact:

ADA Technical Assistance Program

800-949-4232

www.adata.org

Provides access to your regional Disability and Business Technical Assistance Centers (DBTACs).

United States Department of Justice

ADA Home Page

800-514-0301 (ADA Information Line)

www.usdoj.gov/crt/ada/adahom1.htm

Center for Universal Design

School of Design

Campus Box 8613

North Carolina State University

Raleigh, NC 27695-8613

800-647-6777 (Infoline/TTY)

919-515-3082 (Voice/TTY)

www.design.ncsu.edu/cud

Architectural and Transportation Barriers

Compliance Board (The Access Board)

1331 F Street, NW, Suite 1000

Washington, DC 20004-1111

800-USA-ABLE [872-2253]

800-993-2822 (TTY)

www.access-board.gov

Guidelines for recreation facilities

National Center on Accessibility

2805 East 10th Street, Suite 190

Indiana University

Bloomington, IN 47408-2698

812-856-4422 (Voice)

812-856-4421 (TTY)

www.ncaonline.org

Information on swimming pool accessibility

Physical Activity and Disability Resources



National Center on Physical Activity and Disability

Department of Disability and Human Development

University of Illinois at Chicago

1640 West Roosevelt Road

Chicago, IL 60608-6904

800-900-8086

312-355-4058

www.ncpad.org

NCPAD is a comprehensive source for information related to physical activity and disability. The website contains a searchable database containing articles, citations, programs and facilities, and equipment vendors. In addition, the website contains numerous fact sheets, monographs, bibliographies and other downloadable documents on many areas of physical activity, equipment, or exercise guidelines for specific conditions. NCPAD's information specialists can also help find specific resources or information for individuals or organizations.

Active Living magazine

2276 Rosedene Road

St. Ann's, ON L0R 1Y0

905-957-6016

www.activelivingmagazine.com/

American College of Sports Medicine's Exercise Management for Persons with Chronic Diseases and Disabilities

Moore G. (Ed.) (2001)

Human Kinetics

P.O. Box 5076

Champaign, IL 61825

800-747-4457

www.hkusa.com

Conditioning with Physical Disabilities

Lockette, K.F., and Keyes, A.M. (1994)

Human Kinetics

P.O. Box 5076

Champaign, IL 61825

800-747-4457

www.hkusa.com

***Exercise Principles and Guidelines for
Persons with Cerebral Palsy and
Neuromuscular Disorders***

United Cerebral Palsy Association
1660 L Street NW, Suite 700
Washington, DC 20036
800-USA-5-UCP [872-5827]
www.ucpa.org

Fitness Programming and Physical Disability

Miller, P.D. (Ed.) (1995)
Human Kinetics
P.O. Box 5076
Champaign, IL 61825
800-747-4457
www.hkusa.com

New Mobility magazine

No Limits Communications
P.O. Box 220
Horsham, PA 19044
888-850-0344
www.newmobility.com

A Practical Guide to Health Promotion after Spinal Cord Injury

Lanig, I.S., Chase, T.M., Butt, L.M., Johnson, K.M.M.,
and Hulse, K.L. (1996)
Aspen Publishers, Inc.
7201 McKinney Circle
Frederick, MD 21701
800-447-1717

Sports 'N Spokes magazine

2111 East Highland Avenue, Suite 180
Phoenix, AZ 85016-4702
602-224-0500
www.sportsnspokes.com

Equipment

The following list of equipment manufacturers and dealers is not intended to be exhaustive or complete, but rather, it is intended to provide a starting point to encourage further exploration of specific needs and interests.

Bowflex, Inc.

2200 Northeast 65th Avenue
Vancouver, WA 98661
800-618-8853
www.bowflex.com/
Versatrainer

Helm Distributing, Inc.

911 Kings Point Road
Polson, MT 59860
877-883-2147
406-883-2147
www.equalizerexercise.com
Equalizer 1000 (multistation equipment)

Life Fitness

10601 W. Belmont Avenue
Franklin Park, IL 60131
800-634-8637
www.lifefitness.com
Recumbent bikes and low mph treadmills

Magnum Fitness Systems

2201 12th Avenue
South Milwaukee, WI 53172
800-372-0554
www.magnumfitness.com
ADvAntage Trainer (multistation equipment)

Med-Fit Systems

2759 Secret Lake Lane
Fallbrook, CA 92028
800-831-7665
www.medfitsystems.com
Recumbent bikes, treadmills, and other equipment

Pulse Fitness Systems

600 Mission Street
Winnipeg, MB Canada R2J OA2
204-235-0904
www.pulfit.com
Access Series with swing-away seats

Rand Scot, Inc.

401 Linden Center Drive
Fort Collins, CO 80524
970-484-7967
800-467-7967
www.randscot.com/
Saratoga arm and leg ergometers

Sinities Scifit, Inc.

5616A South 122nd East Avenue
Tulsa, OK 74143
800-278-3933
www.scifit.com
Arm and leg ergometers

Catalogs of Exercise Equipment

Access to Recreation

8 Sandra Court
Newbury Park, CA 91320-4302
800-634-4351
www.quadcontrol.com

Sportaid

78 Bay Creek Road
Loganville, GA 30052
800-743-7203
www.sportaid.com

Internet Resources to Help You Search for Equipment

ABLEDATA

www.abledata.com

National Center on Physical Activity and Disability

www.ncpad.org



North Carolina Office on Disability and Health

is a partnership effort of the NC Division of Public Health of the Department of Health and Human Services and the UNC-CH Frank Porter Graham Child Development Center to promote the health and wellness of persons with disabilities in North Carolina.



The Center for Universal Design

is part of the College of Design at North Carolina State University in Raleigh, North Carolina. The Center serves as a national research, information, and technical assistance center that evaluates, develops, and promotes accessible and universal design in housing, public and private facilities, and consumer products.

Other books in this series

Removing Barriers to Health Care: A Guide for Health Professionals
Center for Universal Design and the North Carolina Office on Disability and Health. 1998. 17 pages.

This book walks the health care provider through the process of making a medical facility physically accessible. It is complete with specific ADA requirements, picture illustrations, and some helpful tips on creating accessible environments and services.

Removing Barriers: Tips and Strategies to Promote Accessible Communication

North Carolina Office on Disability and Health and Woodward Communications. 1999. 40 pages.

This booklet is an easy-to-read, quick reference guide that addresses the basics on ways to effectively communicate and interact with people with disabilities. Provides information and tips that can be incorporated into the workplace as well as in daily community living.

Copies of both of these books can be downloaded in PDF or html format from the NCODH website at <http://www.fpg.unc.edu/~ncodh/>
Alternate formats are available on request.



ISBN 0-9709924-5-9