



INCLUSIVE OUTDOOR FITNESS

White paper by Morten Zachø, MSc, KOMPAN Fitness Institute

Inclusion in outdoor fitness is about creating training spaces that are useful and welcoming to everybody. This is achieved by reducing barriers and including a variety of exercise opportunities, so that there will be a relevant use scenario for the widest possible extent of users – disabilities or not. It is important to underline that inclusion is not about creating segregated areas for specific users, but about creating a truly integrated environment. This requires insights from research, design principles, and dialogue with the actual users.



The arm bike is one of the most popular items for people with mobility issues.

The challenges for people with disabilities

The World Health Organization (WHO) describes a person with a disability as someone who has “long-term physical, mental, intellectual, or sensory impairments which in interaction with various barriers may hinder their full and effective participation in society on an equal basis with others”. According to WHO, worldwide one out of six persons suffer some kind of disability. As the risk of disabilities increases with age, this will to some degree affect most of us at some point in life¹⁾.

According to CDC²⁾ the most common disability categories are:

- 14 % of people with a disability have a mobility disability with serious difficulty walking or climbing stairs.
- 11 % of people with a disability have a cognition disability with serious difficulty concentrating, remembering, or making decisions.
- 6 % of people with a disability are deaf or have serious difficulty hearing.
- 5 % of people with a disability have a vision disability with blindness or serious difficulty seeing even when wearing glasses.

People with disabilities tend to be less physically active and are 50% more likely to be obese than people without a disability. People with disabilities are at an increased risk for experiencing multiple related comorbidities, and serious health conditions related to obesity, including type 2 diabetes and cardiovascular disease. Nearly half of all adults with disabilities get no aerobic physical activity; these individuals are 50% more likely to have secondary chronic diseases than those who get the recommended amount of physical activity³⁾.

Bottom line is that people with disabilities have an even higher need for physical activity opportunities than the general population. At the same time, we know that people with disabilities have much fewer activity opportunities. A research study from 2017 looked at accessibility for indoor fitness centers and concluded that many people with physical/mobility disabilities will only have limited access to programs, equipment, and services offered at these facilities⁴⁾.

Compared to indoor fitness, outdoor fitness provides some distinct opportunities to aid with this challenge. Outdoors there are no physical barriers to entry, and it is easier to create spacious environments where people dependent on mobility devices can maneuver. Outdoor gyms can be placed in publicly available areas like parks or unused city space.

KOMPAN research shows that wheelchair users have a high interest in outdoor fitness

In 2019 KOMPAN Fitness Institute conducted a survey among 60 persons with mobility-related disabilities⁷⁾. Of these, 88 % were using a wheelchair daily.

Some of the main findings were:

- 92 % would use an outdoor training facility if it was useful for them
- 69 % would be motivated by equipment for the upper body
- 58 % would be motivated by an arm bike

The results clearly state, that there is no conceptual barrier for people with mobility disabilities to be attracted to outdoor fitness facilities. On the contrary, the majority of the persons from the survey highlighted the usual benefits of outdoor fitness such as free and flexible access. Participants in the survey also

clearly expressed their challenges with finding accessible equipment at both indoor and outdoor fitness facilities. Since 2019 KOMPAN has worked on implementing the learnings from the survey into new outdoor fitness concepts, with the new strength equipment being an example of this.

Designing for inclusive outdoor fitness

Inclusive fitness provides the opportunity for people with disabilities to participate in fitness exercise alongside their peers without disabilities, as equals⁹⁾. This is achieved by applying the principle of universal design, where you design items to be used by everyone to the widest possible extent.

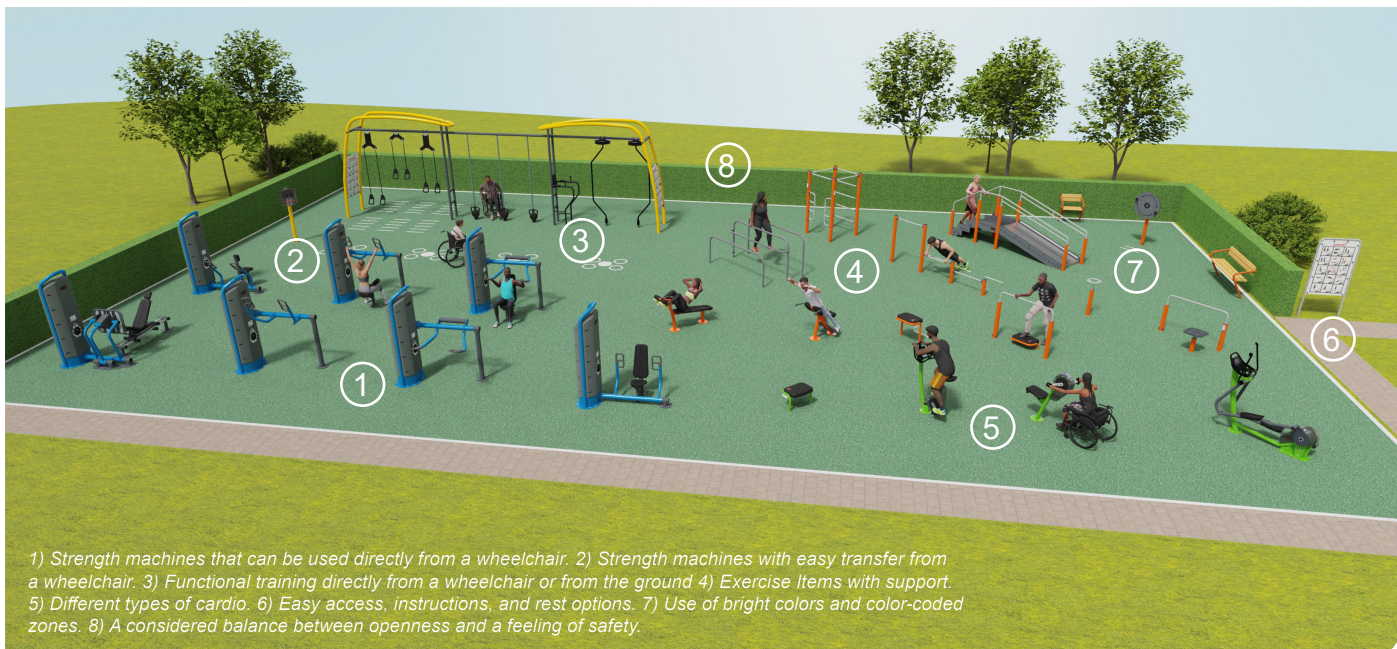
For an outdoor fitness site, it is important to combine items that can be generally used without unnecessary barriers with items designed for specific user groups, such as wheelchair users or people with poor eyesight. In that way, we must accept that not all items can be used by everyone, but everyone will have items they can use.

Universal access can be created by having items with multifunctionality like the KOMPAN back extension bench that can be used for lower back exercises, but also as a safe dip-station accessed from a wheelchair. The KOMPAN cardio equipment has adjustable resistance from a touchscreen or a connected smartphone, but because the resistance increases progressively with pedaling speed, it can provide efficient individualized training without the need for interaction with any screen.

Creating an inclusive fitness area is not just about the selection of equipment and access. It is also very much about the atmosphere created as a combination of the physical environment and the people interacting in the space.



Items placed close to the ground can be used for easy exercises by many types of users.



1) Strength machines that can be used directly from a wheelchair. 2) Strength machines with easy transfer from a wheelchair. 3) Functional training directly from a wheelchair or from the ground 4) Exercise Items with support. 5) Different types of cardio. 6) Easy access, instructions, and rest options. 7) Use of bright colors and color-coded zones. 8) A considered balance between openness and a feeling of safety.

Example of universal design for outdoor fitness

The site in the picture above is an example of applying universal design principles to outdoor fitness. There are plenty of things that can be done directly from a wheelchair or with easy transfer from a wheelchair. There are also things that can be done for blind people or people with poor eyesight because many items have rails or other support for correct body position and don't require visual feedback. Several items – such as the bike or the chest press - have intuitive functionality and controlled motion and body support, so that people with cognitive disabilities can use them. Finally, the site offers as many possibilities for non-disabled users as a site without considerations for inclusiveness.

Communicating inclusive fitness

It is important to have a clear language when communicating access to universal designed fitness equipment. Not just for disabled users, but also very much for non-disabled users to create a welcoming, social atmosphere for an outdoor training space⁵⁾. Previously the wheelchair icon has been used, but primarily to indicate access to items in terms of honoring ADA requirements for free space. As the icon has not been saying anything about the possible use of a product from a wheelchair, the reality is that the icon has been of little value in the context of fitness.

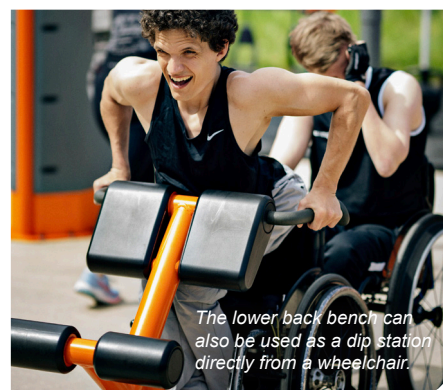
In 2019 Barstow and colleagues published a research paper on the interpretation of different alternative icons⁶⁾. One icon stood out as being the most clearly interpreted and appreciated by a variety of different users with or without disabilities.



The icon is a combination of three different symbols thereby not limiting the interpretation to for instance a wheelchair user only. KOM-PAN has chosen to use this icon to indicate which exercise opportunities that are most suitable for inclusive outdoor fitness solutions. At the outdoor fitness sites, it is important to communicate that the sites are equally intended for disabled and non-disabled users. This can be in the choice of illustrations and instructions, but very much also by having equipment that sends this message by design – like the arm bike as an example.

Summary

Worldwide one out of six persons suffers some kind of disability. People with disabilities have an even higher need for physical activity opportunities than the general population but, paradoxically have much fewer activity opportunities. Inclusive outdoor fitness can be part of solving this challenge by providing training spaces that are useful and welcoming to everybody. The key to inclusion is to provide a balanced mix of general usable items and items optimized for people with specific needs. It is the careful process of removing barriers and adding options that create the desired effect where people with different types of disabilities have the same opportunities within the area as non-disabled. The final key is communication. The fitness site must through its physical design, images, and text send the message that this area is for everyone.



The lower back bench can also be used as a dip station directly from a wheelchair.

References

1. WHO policy on disability. Geneva: World Health Organization; 2021.
2. Centers of Disease Control and Prevention. Disability and Health Overview. www.cdc.gov/ncbddd/disabilityandhealth/
3. Fox MH, Witten MH, Lullo C. Reducing Obesity Among People With Disabilities. *J Disabil Policy Stud.* 2014 Dec;25(3):175-185.
4. Rimmer et al. Fitness facilities still lack accessibility for people with disabilities. *Disabil Health J.* 2017 Apr;10(2):214-221.
5. Nikolajsen et al. Fitness for all: how do non-disabled people respond to inclusive fitness centres? *BMC Sports Sci Med Rehabil.* 2021 Jul 30;13(1):81.
6. Barstow et al. Examining perceptions of existing and newly created accessibility symbols. *Disabil Health J.* 2019 Apr;12(2):180-186.
7. Schöttel MF & Zacho M. Research Report: Active wheelchair users - experience, motivators, barriers and needs in relation to outdoor fitness. KOM-PAN Fitness Institute 2019
8. The Inclusive Fitness Toolkit. Yang-Tan Institute on Employment and Disability. Cornell University 2017



An inclusive circle with 10 stations

Yellow circles can be utilized directly from a wheelchair. Other items have easy transfer and are very easy to use for people with reduced balance or sensory impairments.

KOMPAN®

KOMPAN International Sales
C.F. Tietgens Boulevard 32C
5220 Odense SØ
Denmark
Tel.: +45 63 62 12 50
export@kompan.com
www.kompan.com