CrossFit®
EDUCATION

ADAPTIVE ATHLETE TRAINING

MINI COURSE

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Learning Objectives

By the end of this course, trainers will be able to:

1. **Identify** the different categories of adaptive athletes, showing understanding of how each category of impairment impacts athletes' ability to train regarding the 10 general physical skills and power output.
2. **Demonstrate an understanding of the differences between scaling and adapting workouts** for adaptive athletes and how language choice impacts their success and longevity in the gym.
3. **Create training plans** by adapting various workouts through changing one or more of the following characteristics:
    - Weight, reps, and domains
    - Movement function
    - Functional movement themes
    - Variance
4. **Identify appropriate accommodations** necessary to make their facility accessible to adaptive athletes and show understanding of considerations regarding equipment and skin integrity for these athletes.

PART 1: TYPES OF ADAPTIVE ATHLETES

In Part 1 of this guide, you'll learn about each adaptive category in CrossFit. In each subsequent part, we will dive deeper into tips for accessible facilities, coaching and communicating with adaptive athletes, the differences between scaling and adapting, and best practices for adaptation versus scaling.

Understanding Adaptive Categories

Not everyone in our community fits neatly into the following categories — they're a starting place for working with different disabilities. Each category is based on the athlete's ability to train the 10 general physical skills and how their impairment affects power output.

OUR DEFINITION OF AN ADAPTIVE ATHLETE:

Anyone with a permanent impairment that affects their ability to produce power.

We currently use eight categories in competition, which can be broken down into subcategories based on how the athlete's impairment affects their ability to train the 10 general physical skills and power output.

The Eight Categories

1. UPPER-EXTREMITY ATHLETES

These are athletes with impairments that affect their capacity from the shoulder to the hand. They have at least one arm impaired between the shoulder and hand, affecting their ability to complete work. Impairments can be congenital or result from traumatic events, causing amputation or permanent injury.

SUBCATEGORIES:

- **Above the elbow:** Impacts the athlete's capacity to produce power and balance equipment like barbells.
- **Below the elbow:** Affects which attachments (straps or prosthetics) may be used for barbell movements or hanging gymnastics movements.

2. LOWER-EXTREMITY ATHLETES

These are athletes with impairments affecting their capacity from the hip joint to the foot. They have at least one affected leg and some form of impairment between the hip joint and foot that affects their ability to complete work. Like upper-extremity athletes, impairments can be congenital or result from traumatic events, including single or double amputations.

SUBCATEGORIES:

- **Above knee:** Significantly impacts balance, agility, coordination, power, and flexibility.
- **Below knee:** Affects range of motion based on ankle, knee, and hip joint function.

KEY INSIGHT

The ability to control and stabilize the knee joint makes a significant difference. A functioning knee joint greatly affects the athlete's capacity to flex and extend the hip in certain movements. For lower-extremity athletes, the number of affected joints predicts how we can help them move.

3. MULTI-EXTREMITY ATHLETES

These are athletes with impairments affecting both the upper and lower extremities. They may also have systemic neuromuscular impairments affecting the ability to contract and control muscles, thereby affecting balance, coordination, agility, accuracy, and power.

This category includes a wide range of disabilities:

- Certain types of cerebral palsy
- Certain forms of ataxia
- Upper and lower limb differences or amputations
- Muscle weakness and hypertonicity

This category tends to include many athletes with neurological impairments who can still stand and perform movements safely. It's one of the largest categories in terms of impairments and poses unique challenges for safe programming and coaching.

4. SEATED ATHLETES

These athletes must complete work from a seated position for safety, efficacy, and efficiency. These athletes generally have impairments associated with spinal cord injuries, certain forms of cerebral palsy, spina bifida, amputations, or combinations thereof.

SUBCATEGORIES:

- **With hip function:** Voluntary contractile control of muscles surrounding the hip joint, allowing extension and flexion.
- **Without hip function:** No voluntary hip control.

Why this matters: Hip function significantly affects balance, coordination, and power production. As the CrossFit Level 1 Training Guide states, "Powerful, controlled hip extension is necessary and nearly sufficient for elite athleticism."

Additional consideration: We typically see loss of abdominal control at the T6-T7 junction of the thoracic spine, which plays a significant role in balance and power production.

5. VISION ATHLETES

These athletes have some degree of impaired vision, from completely blind to partial sight. These athletes may:

- See only at very close range
- Require high contrast in color or brightness
- Have limited visual fields
- Be completely blind

Transitioning between movements or seeing objects they're lifting dramatically affects power output if not considered. These impairments significantly impact balance and coordination — imagine snatching with your eyes completely closed. Safety of setup and movements is crucial for athletes who cannot see equipment placement or their movement path.

6. SHORT-STATURE ATHLETES

These athletes have some form of dwarfism, defined in sport as under 57 inches in height for men and 54 inches for women, along with anatomical disproportionality of the limbs.

This condition can be associated with:

- Achondroplasia
- Growth hormone dysfunction
- Osteogenesis imperfecta

These conditions impact bone growth in cartilage growth plates, overall height, hand and foot size, bone density, and sometimes breathing. This affects safe lifting loads, range of motion, and power output based on lever arm length.

7. DEAF ATHLETES

These are athletes with complete hearing impairment or limited hearing ability, which may have resulted from birth or later traumatic events. Some conditions may be progressive and worsen over time. If the inner ear is impacted, balance issues may arise.

MAIN CONSIDERATIONS:

- Communication and safety
- Effective cueing and correction
- Ensuring athletes can see the coach and the clock
- Safe attention-getting methods during workouts

While deafness may not directly affect power output, our coaching ability to safely increase efficacy and efficiency can be impaired without proper communication skills.

8. INTELLECTUAL DISABILITIES

These are athletes with conditions impacting knowledge and skill acquisition, particularly neurodevelopmental conditions affecting intellectual processes, educational attainment, and skills needed for independent living and social functioning.

TRAINING CONSIDERATIONS:

- Need more consistent instruction
- Require more one-on-one attention
- Benefit from individualized motivation
- Often have impairments in balance, coordination, and agility
- Have high potential for strength when coaches communicate effectively and motivate properly

Why Categories Matter

These categories provide a common language for discussing principles for specific impairment groups to:

- **Understand the mechanical differences** for points of performance specific to these athletes.
- **Effectively assess** the correct volume amount to maintain consistency.
- **Determine** where we can and can't push intensity for these athletes.

As with able-bodied athletes, it all comes back to

MECHANICS, CONSISTENCY, AND THEN INTENSITY.

Key Takeaways

- Not everyone with a permanent impairment fits neatly into these categories.
- Like any other athlete, the key to training them safely and effectively is asking about what you don't know.
- Get to know your athlete as a person, not just an athlete.

RESOURCES FOR DEEPER LEARNING

Adaptive Training Academy
Fit to Function
WheelWOD

PART 2: COACHING ADAPTIVE ATHLETES — LANGUAGE CHOICE AND ADAPTING WORKOUTS

In Part 1, we discussed categories of adaptive athletes. Next, we'll examine the language behind coaching adaptive athletes and the importance of understanding how adapting differs from scaling.

Navigating Language and Approach

We live in a world where people can be easily offended, making it scary to approach an athlete with a disability. This is especially true for those unsure of the correct verbiage or approach when discussing impairments. Let's discuss two common approaches, then learn why neither is entirely correct and what to do instead.

PERSON-FIRST LANGUAGE

This approach orders words to acknowledge the person before the disability: "a person with a disability" rather than "a disabled person." Advocates argue this is proper because it identifies the individual as a person, not a disability, acknowledging that their identity isn't defined solely by what they can't do.

IDENTITY-FIRST LANGUAGE

This approach puts the identifying disability first, using terms like "paraplegic," "stroke survivor," or "autistic person." Supporters argue this allows adaptive individuals to own their impairment as part of their identity, making it powerful and positive.

THE REALITY: YES AND NO

Each approach is partially right and partially wrong. There are 86,294,000 disabled individuals in the United States alone, and every single one may have a different preference. Many have decided that one approach is right and the other offensive. With one person, specific communication might go well, while another might be offended by the same word choice.

WHAT SHOULD YOU DO?

As both a person with a disability and a disabled person, here's my advice: **use the approach you find most respectful. Remain genuine with your questions, and treat every person with a disability like any other person.**

If someone prefers one approach over another, they can respectfully ask you to use it, and you should comply the next time. However, if you try to respectfully approach or talk to an adaptive athlete and they become upset with you, that says more about them than you — maybe it's not the right coach-athlete pairing.

Remember: Having a disability doesn't exempt someone from being challenging to work with. We are all human.

Adapting vs. Scaling: Critical Differences

Now that you can approach adaptive athletes with more confidence, it's crucial to distinguish between adapting and scaling.

You may have always believed we use the same principles for both or use the terms interchangeably. While we use similar principles to adapt and scale for our athletes, it's incredibly important to understand that adapting is not equivalent to scaling.

KEY DEFINITIONS

- **Scaling:** Maintaining the originally intended stimulus by maintaining as many original functions and pieces as possible.
- **Adapting:** Maintaining the originally intended stimulus by changing the original pieces of the workout to maintain the function.

Risk vs. Reward Analysis

When differentiating the two, we must consider risk versus reward.

Example: Rotator Cuff Surgery vs. Brachial Plexus Injury

ROTATOR CUFF SURGERY (SCALING):

- Main limiting factor: pain
- Goal: promote healing and prevent further injury
- Focus: contralateral healthy shoulder
- Approach: One-armed wall-ball shots are probably inappropriate due to imbalance risk and excessive single-arm volume
- *Risk outweighs reward*

BRACHIAL PLEXUS INJURY (ADAPTING):

- Goal: explore how they'll navigate the world with natural limbs
- Reality: may never regain full strength
- Approach: One-armed wall-ball shots are beneficial because this is how they need to operate in the real world
- *Reward outweighs risk*

The Psychology of Athletes

SCALED ATHLETES

- Can train the 10 general physical skills.
- Can improve power output and fitness toward Rx'd versions.
- May have genetic or traumatic limitations, but no physical impairment prevents all improvement with effort.
- Rx'd can always be a goal — something to strive for.

ADAPTIVE ATHLETES

- Their impairment will always be something they deal with, but this doesn't have to limit them.
- A seated athlete without hip function will never complete Nancy as prescribed.
- Able-bodied Rx'd suggests these workouts aren't meant for them.
- Their Rx'd will look different.

KEY INSIGHT

It doesn't matter if your adaptive athlete's workout looks the same as the rest of your class, but it does matter that they get the same stimulus and intent as everyone else.

EXAMPLES OF MAINTAINING STIMULUS

- **Cardio-heavy workout:** Their lungs should be on fire like everyone else's.
- **Heavy day:** They should be lifting heavy with everyone else.
- **Example:** If a seated athlete benches while others back squat, you've maintained the stimulus.

Adapting AND Scaling

You can both adapt and scale for the same workout. Let's use Fran as an example:

ORIGINAL FRAN	ADAPTED RX'D FOR SEATED ATHLETE	SCALED VERSION FOR NEW SEATED ATHLETE
• 21-15-9 reps for time of: • Thrusters (65/95 lb) • Pull-ups	• 65-lb shoulder-to-overheads • Pull-ups with feet on the ground • This becomes the "Seated Rx'd"	• 15-lb shoulder presses • Banded lat pull-downs • Allows them to feel Fran's stimulus while staying safe

Just like able-bodied athletes, **program for the best and scale for the rest.**

The Power of Words

Words are powerful, but I believe the intent behind those words matters most. Wrong words with the best intent allow for conversation about the right words. The right words with the wrong intent can end conversations and miss opportunities to improve someone's life, including your own.

Giving your adaptive athletes the respect they deserve means:

- Talking to them like humans
- Not being so afraid to offend that you don't work with them
- Giving them an achievable Rx'd with workouts meant for them

This approach will grow your adaptive athlete population and improve your coaching skills.

PART 3: THE WHY AND HOW BEHIND ADAPTING

Coaches new to training adaptive athletes often fear they won't know what to do. However, I tell coaches that if they've taken CrossFit Level 1 and Level 2 Certificate Courses and understand that material well, they have all the knowledge needed to work with adaptive athletes.

Are there things to learn beyond Level 1 and Level 2 content? Absolutely. But there will always be more to learn — you don't need to know everything to start. I've been working with adaptive athletes for almost a decade, and I still learn new things about different impairments regularly.

Don't let what you see as a lack of knowledge stop you from improving someone's life.

Understanding the Athlete

Adapting workouts uses principles almost identical to scaling for temporarily injured athletes, with a few extra considerations. It all starts with asking questions.

ESSENTIAL QUESTIONS TO ASK

- What's your background?
- What are your goals?
- How does your impairment affect your movement?
- What have you tried?
- Why has it worked or not worked?
- Is your impairment congenital or from a traumatic event?
- If traumatic, how long ago did it occur?

These questions offer insight into how comfortable the athlete is with pushing outside their comfort zone or discussing their impairment. Someone new to adaptive life may need more TLC to get outside their comfort zone. Someone who's been adapting their whole life might be ready to dive right in.

DON'T BE AFRAID TO ASK QUESTIONS

Posing a question helps you understand how to best train your athlete. Don't be afraid to have them try new things. Not everything will succeed, but understanding your athletes' limits helps you get past them.

Making an Adaptation Plan

Once you have answers, the next step is building a plan for actually adapting movements. Level 1 and Level 2 information provide an excellent starting point. The main goal remains keeping the adapted workout as close to the originally intended stimulus as possible.

This requires truly understanding the "why" behind the workout.

What do you want your athletes to get out of today's training?

Adaptation Methods

1. WEIGHT, REPS, AND DOMAINS

We can always adapt by changing weight, reps (distance), and, for some impairments, time domains. Most categories can still perform many of the same movements. However, to keep the stimulus, we may need to lighten the load or decrease reps.

Examples:

- **Lower-extremity athlete:** Drop deadlift weight.
- **Upper-extremity athlete:** Decrease toes-to-rings reps.
- **Multi-extremity athlete with neuromuscular conditions:** Decrease reps or time domain.

These are excellent adaptations because these athletes can still perform the movements — we just need to consider lowered power output capacity due to their impairment to ensure they achieve the same stimulus.

2. MOVEMENT FUNCTION

Consider movement function (push vs. pull, upper vs. lower) and how it affects an athlete's ability to perform everyday life functions. When adapting movements and entire workouts, think about making the specific adaptive athlete stronger at life skills that will serve them outside the gym.

Examples:

- **Transferring from surface to surface** (getting off the couch): Air squats adapted to dips for seated athletes.
- **Lifting something heavy overhead** (box onto shelf): Barbell press to single-arm dumbbell press for upper-extremity athletes.
- **Pushing compensation threshold for dizziness** when getting off the ground for athletes with vestibular ataxia: Burpees or lunges.

3. FUNCTIONAL MOVEMENT THEMES

If previous methods don't fit the movement you're adapting, extract functional movement themes from standard functional movements: midline stabilization, posterior-chain engagement, core-to-extremity movement, full range of motion, and active shoulder. Find movements for your athlete that train these themes while keeping as much intended stimulus as possible.

Examples:

- **Midline stabilization:** 300 air squats in Murph adapted to 300 medicine-ball core twists for seated athletes.
- **Active shoulder:** Handstand walks adapted to overhead dumbbell carry for upper-extremity athletes.
- **Posterior chain engagement:** Deadlifts adapted to banded kneeling hip extensions for new lower-extremity athletes or double amputees with sufficient residual limbs.

Remember: Variance Matters

CrossFit is defined as constantly varied functional movements executed at high intensity. Keep adaptations varied to help athletes progress. It will almost never be an A = B situation when adapting, so start compiling lists of what works and what doesn't.

Functional movements move large loads long distances quickly. Sometimes, for adaptive athletes, the way they move the largest load the longest distance the fastest won't look the same as it will for you. For an adaptive athlete, sometimes a bicep curl is functional by our definition.

Intensity remains the independent variable that gets results. With high intensity and low volume, we risk injury and overuse much less.

The Long View

Adapting movements and workouts for adaptive athletes uses many of the same principles as scaling for injured athletes, but with adaptive athletes, we must focus even more on the long view — these athletes will use these adapted motor patterns for the rest of their lives.

Asking questions and truly knowing the "why" behind each movement and overall workout will help you build skills and better understand adaptive training.

For more information: Adaptive Training Academy's Adaptive and Inclusive Training

PART 4: SPECIAL CONSIDERATIONS FOR ADAPTIVE TRAINING

In this final part, we cover do's and don'ts and special considerations for adaptive training. Training adaptive athletes isn't as complex as you might think, but it does require coaches to think more intentionally about what athletes experience daily and how training affects their everyday lives.

Your Facility: Is It Accessible?

You may never have considered how athletes will get into your building or whether they can use the bathrooms, but for many adaptive athletes, this is a dealbreaker. From personal experience, if I can't get into the building or they don't have a bathroom I can use, I won't stick around or return to that gym.

Additionally, the Americans with Disabilities Act (ADA) requires businesses to provide reasonable accommodation for the physical or mental limitations of qualified individuals with disabilities, so compliance protects your facility.

WHAT MAKES A FACILITY ACCESSIBLE?

1. ACCESSIBLE ENTRANCE.

If there are only stairs, it's a considerable problem for seated athletes, some lower-extremity athletes, and some multi-extremity athletes. Ensure you have an entrance available for people who can't navigate stairs.

2. ACCESSIBLE BATHROOM

- The door must be over 30 inches wide (ideally 36 inches) for wheelchair entry.
- Must have a 5-foot turning radius inside for ADA compliance.
- Horizontal and vertical grab bars help athletes who struggle to or can't stand independently.
- If using stalls, label the accessible stall with handicap signage so it's left available for those who need it.
- If showers are available, ensure an accessible shower with a shower bench.
- Research disability laws in your area for complete compliance requirements.

3. OPEN FLOOR PLAN.

Make it easier for adaptive athletes, especially seated athletes, to move around and remain independent when grabbing gear and setting up. Imagine the nuisance of always asking someone to grab everything you need for a workout instead of getting it yourself.

STORAGE CONSIDERATIONS:

- Ensure equipment is accessible for those seated or using only one arm.
- Check plate storage — stacks of bumper plates with pipes through them are incredibly difficult for seated and upper-extremity athletes.
- Options allowing athletes to roll weights on or off racks improve their experience.
- Pro tip: When a new adaptive athlete arrives, have them tour the facility with you to see if you can rearrange anything to make it easier for them to be independent. This small effort has a major impact.

Equipment Understanding

Most adaptive athletes use equipment to help them work out safely, efficiently, and effectively. You don't need to be an expert in their equipment, but it's important to have a basic understanding of what it's for, how they use it, how it's attached, and how it affects movement.

KEY CONSIDERATIONS

Prosthetics:

- Learn where and how lower-extremity prosthetics attach — this impacts movement, leverage, and original limb use.
- Running prosthetics are great for running, but not heavy lifting.
- Prosthetics meant for heavy loads may not be best for running.
- These considerations impact how you adapt workouts.

Cost and Replacement Reality: Getting new adaptive equipment or replacing broken equipment isn't like ordering a jump rope or new shoes. Generally, adaptive athletes must go through insurance and battle over whether they need it. Even then, out-of-pocket costs can be incredibly expensive.

- Basic prosthetic: US$5,000 to $70,000+
- Wheelchairs: US$4,000 for a basic manual chair to $30,000+ for a customized power chair

COACH RESPONSIBILITIES

A good coach understands the basics of their athletes' equipment:

- Weight limits
- Intended function
- How it impacts movement
- This effort prevents equipment breakage, supports athlete autonomy around the gym, and prevents injury.

Skin Integrity and Everyday Living

It's imperative to consider adaptive athlete skin integrity.

CRITICAL CONSIDERATIONS

Seated Athletes (Paraplegics and Quadriplegics): When they sit on hard surfaces, land hard, or perform new movements putting pressure on bony prominences, there's potential for skin issues that can take months or years to heal.

- Ensure athletes sit on pads
- Check skin after new movements or prolonged pressure positions on the sit bones

Prosthetic Users: Damage to skin, especially where it attaches to prosthetics, can sideline adaptive athletes for extended periods in both gym and everyday life. Prosthetics, orthotics, straps, and grip aids can cause severe irritation, abrasions, cuts, and blisters.

- Have lower-extremity athletes stop mid-workout and dump sweat collected in prosthetics to prevent skin damage.

TRAINING'S IMPACT ON DAILY LIFE

Consider how training affects everyday life. If we have a new seated athlete and the workout absolutely annihilates their arms, they likely won't be able to perform everyday tasks like using their wheelchair or transferring between surfaces independently.

Key principle: Prioritize intensity WAY over volume for these athletes. Their time in your gym should improve everyday life, not hinder it.

Do Your Own Research

Don't trust everything I say without learning more for yourself. Learn, look things up, try new things, read research articles, and most importantly, talk to the adaptive athletes in your gym. Some may disagree with me (they have a right to be wrong … kidding).

Find out as much as you can about their impairments and equipment. This will help you train these athletes and, more importantly, show them you care.

Final Thoughts

By reading this, learning to work with adaptive athletes, and creating a more accessible facility, you effectively show you care about the adaptive community, and that's the best place to start.

You can always learn more about adaptive training, but it's really hard to learn how to care about others.

I appreciate all who have read this and are willing to work with adaptive athletes. The CrossFit community is special, and CrossFit affiliates are doing more to support the adaptive community in realizing they are capable, independent, and human, than any other form of fitness, strength and conditioning program, or preventative healthcare system.

In the disability world, we're constantly told, "No, don't," "You can't," "You shouldn't," and "It's not possible." The CrossFit community has shown that yes, we can, we do, we should, and more things are possible than ever imagined for this community.

So, as someone who is part of both worlds, thank you.

About the Author

Kevin Ogar is a Certified CrossFit Level 3 Trainer, a 10-year member of the CrossFit Seminar Staff, and co-owner of CrossFit WatchTower, a 10-year affiliate in Colorado with his wife, Shannon. He is also the co-founder of WheelWOD, offering adaptive programming and competitive avenues for adaptive athletes. Kevin is a content contributor for multiple sources that teach about adaptive fitness. As a competitor, Ogar is a four-time Regional competitor as an able-bodied athlete, the 2022 CrossFit Games champion in the seated without hip category, and has represented Team USA in the Para Powerlifting World Championships. After a spinal cord injury in 2014, Ogar has become a leading advocate for adaptive athletes and a respected figure in the fitness community.