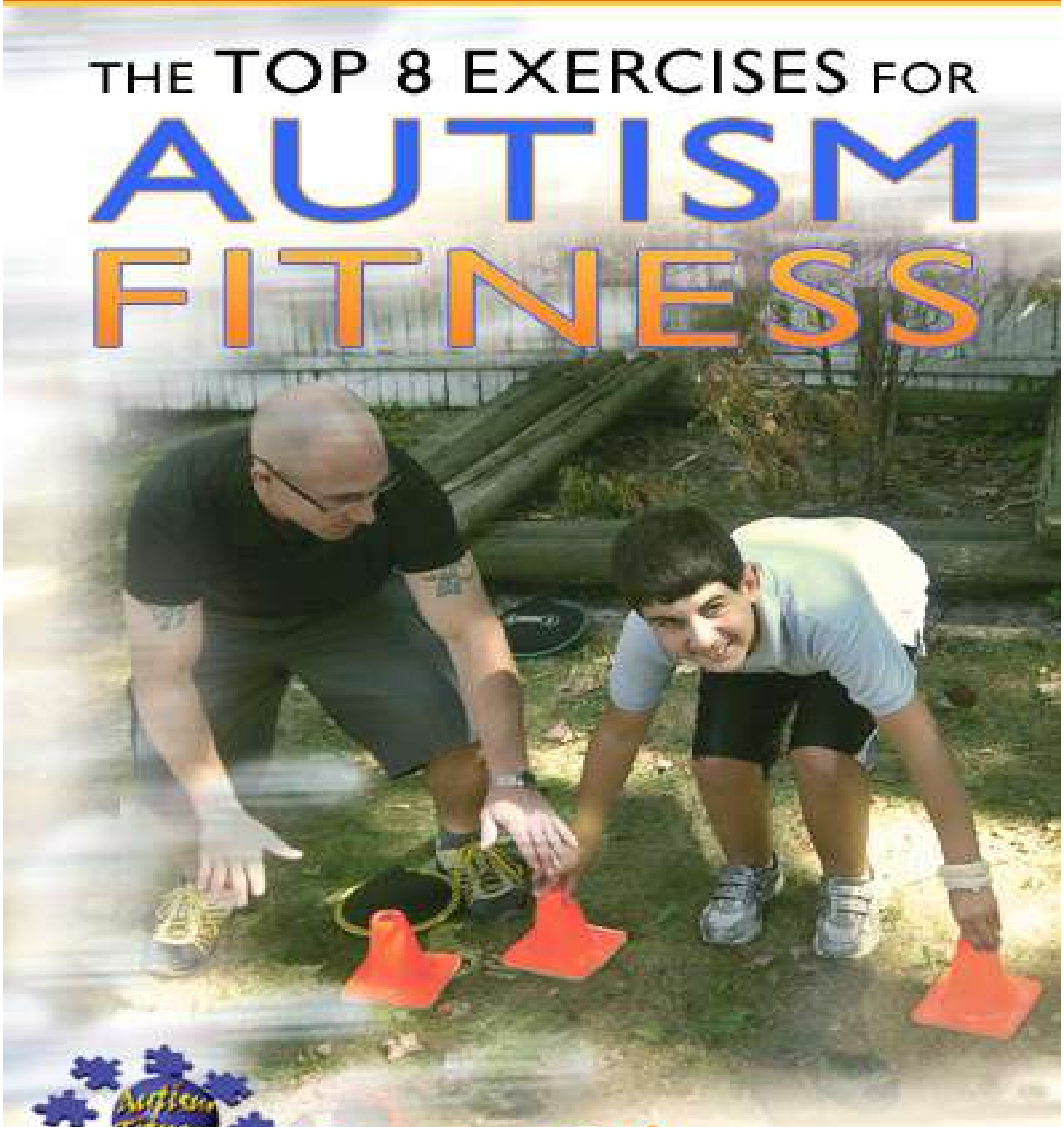
THE TOP 8 EXERCISES FOR AUTISM FITNESS



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About This E-Guide

The information in "The Top 8 Exercises for Autism Fitness" was developed by Eric Chessen, M.S., Founder and is not intended for distribution without expressed written (electronic or otherwise) permission.

The exercises presented in this manual are intended only for use in safe, appropriate environments by trained professionals and/or parents. While fitness activities should be available to all populations, it is crucial that any instructor has a basic understanding of physiology, movement patterning, behavior support, and best practices for educating the ASD population. Autism Fitness (Theraplay-ny, LLC) assumes no risk for any activity or program undertaken without direct supervision and/or contractual involvement.

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Thank you, both on my behalf and those on the autism spectrum who can benefit from fitness and active play programs, for signing up on the Autism Fitness newsletter and reading this download. As the Founder of Autism Fitness, I realized the absolute necessity of exercise programs for the ASD and special needs population over a decade ago when I started my career. Rather than a "therapeutic intervention" fitness MUST be part of an individual's life skill programming, whether in the classroom, at home, or in the gym/movement center.

Young people with autism often have deficits in gross motor skills, including strength, stability, and movement planning. New research also suggests that individuals with autism, because of sedentary lifestyle and a lack of access to regular fitness programs, are more likely to become overweight and/or obese than their peers. A proactive approach to fitness as a part of life can not only close some of these movement gaps, but enhance a variety of skills including:

- **Physical abilities (strength, stability, coordination, motor planning, strength endurance)**
- **Social skills (when activities are performed appropriately with peers)**
- **Self-esteem (when reinforcement is delivered consistently and mastery occurs)**
- **Independence (when the athlete uses physical skills to perform daily life tasks on his/her own)**
- **Cognitive functioning (possible through the enhancement of certain areas of the brain as a result of regular physical activity)**

All Autism Fitness programming is based upon the PAC Profile (www.AutismFitnessToolbox.com). I developed the PAC Profile after nearly a decade of working with many individuals of all ages and ability levels. You can have a great selection of exercises, but there are two other factors that are absolutely critical for success, both yours as an instructor/coach and of the athlete...

PAC is an acronym for Physical, Adaptive, and Cognitive; the 3 areas of functioning that have to be addressed if you want a fitness program to work well at all. Here is what the 3 areas of ability mean:

Physical: What the athlete is *able* to do
Adaptive: What the athlete is *motivated* to do
Cognitive: How the athlete learns best in a physical activity situation

Being able to identify not one, but ALL 3 of these skills prevents wasted time, frustration, and randomly guessing what "might" work. You need to know this to assess, develop and provide programming, and when setting goals.

Before I share my "Top 8" Exercises for Autism Fitness, it is important to mention that activities should always be progress-able and regress-able; they can be made more challenging or more simple, respectively. This is one of the most significant problems with using sports-based programs with the autism population. Sports movements are very specific (they really only pertain to that particular), and can only be simplified to a certain point before they lose relevance.

General fitness activities, those listed below being outstanding examples, can be made as simple or complex as needed, whether for an individual or group. Different variations of these activities can be used to strengthen what needs strengthening, and enhance the skills that already exist.

The difference between sport-based movements and general fitness/active play is the focus on developing movement patterns. All Autism Fitness activities are based on developing these patterns:

- **Squatting**
- **Pushing**
- **Pulling**
- **Rotation**
- **Locomotion**

Using these movements as a foundation for an adaptive PE or physical fitness program can also help to ensure fitness over a lifetime, rather than a few months of basketball, soccer, baseball, or karate before they quit or the program is discontinued. We don't do five pushups at the gym one day and then conclude that we're fit for the rest of our lives, it has to be an ongoing process with new goals and skill acquisition. THAT, my friends, is fitness.

These 8 exercises below are both party of my PAC Profile (www.AutismFitnessToolbox.com) program, and what I regularly use as go-to activities with my Autism Fitness athletes. They can all be regressed and progressed, and work for both individual and group settings.

1) Squatting to a ball

This is an essential movement pattern that ALL of my athletes perform in one way or another. Proper squatting increases lower body strength, trunk stability, and can prevent low back pain in the future when performed consistently and correctly. I use medicine balls from Dynamax because of their ideal size and soft covering.

Steps:

1) Stand with feet apart in front of ball (use spot markers if it helps)
2) Sit until bottom makes contact with ball
3) Stand up with heels planted on the ground

Regression Options:

1) Have athlete squat to a higher position. Knees should never be turning inward and feet should always be planted on the ground
2) Hold the athletes hands while he/she performs the squat
3) Have the athlete start from a seated position and stand up. Hold the athlete's hands when he/she performs the eccentric (lowering) portion of the movement to provide stability

Progression Options:

1) When the athlete can perform about 6 consecutive body weight squats independently, they can hold a light Sandbell or weighted object either close to the chest or behind their neck resting on the shoulder blades
2) Add a movement to the squat, for example: Squat and then raise arms overhead

2) Overhead Sandbell Press

The Hyperwear Sandbell is one of my favorite fitness implements for Autism Fitness programs. Soft and durable, Sandbells can be filled with either sand (self-explanatory) or with steel shot (small steel pellets) to double the weight. They range in weights from 1-50lbs (or more depending on sand or steel). I prefer them to a dumbbell for many of my clients, as even a 5lb. Dumbbell, when dropped on an instructor's foot, does not create a pleasant sensation.

The overhead press develops shoulder strength, trunk (aka “core”) stability, and is an essential movement pattern for anyone with arms.

Starting position

Overhead position

Overhead Sanbell Press continued...

Steps:

1) Hold the Sandbell at chest with all fingers making contact on the Sandbell
2) Press Sandbell overhead with full arm extension
3) Return Sandbell to starting position

Regression Options:

1) Physically prompt whole movement with instructor's hands over hands of the athlete
2) Physically prompt partial movement from where the athlete demonstrates difficulty (most typically "locking out" or performing the top range of the press)

Progression Options:

1) Add repetitions
2) Add a heavier Sandbell (usually anywhere from 3-5lbs. Heavier)
3) Add movement, for example: 6 Sandbell presses + 3 slams to the floor

3) Overhead Sandbell/Medicine Ball/Body Bar Walk

Overhead walks require upper body strength and stability and motor planning. I use them with all of my Autism Fitness athletes. Carrying things overhead is simply one of the best activities you can include in your fitness or PE programs. The generalization, or "carryover" to other physical activities and tasks in daily life is quite high. With my younger athletes, I typically use a Sandbell (4-10lbs), while my older and/or stronger athletes may use heavier Sandbells, Dynamax balls (larger in diameter than the Sandbell), or a Body bar (usually between 12-25lbs.).

Start with Sandbell at chest

Press overhead

Walk to designated spot (I like 5-15 feet)

Overhead Sandbell/Medicine Ball/Body Bar Walk continued...

Steps:

1) Perform overhead press
2) With arms extended overhead, walk to a designated stop point (use spot markers or cones for a visual aid) or as far as the athlete wants to go (within reason).

Regression Options:

1) Provide physical prompt with instructor's hands supporting/lightly holding the athlete's wrists or elbows to ensure arms straight overhead
2) Provide visual prompt with the instructor holding his/her arms up in front of the athlete while the athlete performs the exercise

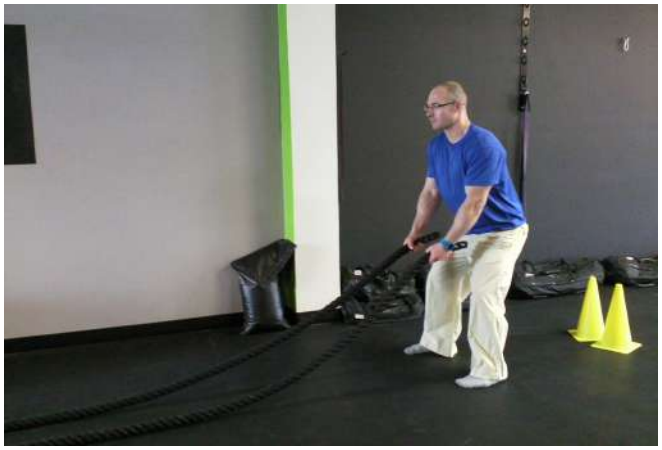
Progression Options:

1) Increase weight of the object
2) Increase length of walk
3) Add presses or squats at the beginning

4) Double Rope Swings

Many of the educational programs with whom I've consulted want to improve their student's cardiovascular health and lead me into a room that has a treadmill or eliptical machine. For a variety of reasons that range from continuing to reinforce problematic gait/walking patterns to the fact that it just sucks, these machines are NOT a good option. One of the best cardiovascular exercises (for any population) is rope swinging, aka rope undulation or "Battling Ropes," depending on which organization or company is presenting the informational product.

ALL of my athletes do some form of rope swings. Swings are automatically regressive/progressive according to how fast and powerfully the athlete can swing them. They are very safe, and become fun pretty quickly in my experience teaching them to individuals on the autism spectrum. The double swing helps to develop strength endurance, whole body stability, and timing.



Begin with feet shoulder-width apart (spot markers can be used), with hands holding rope in resting position

Raise rope up to chest height, swing up and down vigorously

Double Rope Swing continued…

Steps:

1) Begin with feet shoulder-width apart (spot markers can be used), with hands holding rope in resting position
2) Raise rope up to chest height, swing up and down vigorously

Regression Options:

1) Physically prompt swing with instructors hands over hands of athlete while swinging
2) Provide visual prompt, standing next to athlete and modeling the swinging motion

Progression Options:

1) Have the athlete perform x more repetitions (usually increase by 5-10)
2) Have the athlete perform swings for total time (up to 60 seconds), taking breaks when needed

5) Push Throws

Medicine ball throws are a foundation of Autism Fitness programs. They enhance power, coordination, and reactive skills, plus have a socialization aspect that can be built upon in some creative ways. The push throw is the first of 3 different throws that I teach my athletes. These can be performed with a medicine ball (preferably Dynamax) or light (2-4lb. Sandbell).

Start with medicine ball held at chest. Release from chest in pushing motion.

Steps:

1) Hold medicine ball at chest
2) Facing (and looking at) partner, push the ball away from chest and release
3) Catch and repeat

Regression Options:

1) Stand close and pass the ball back and forth between partners
2) Instructor stands behind athlete and prompts, with hands over hands or elbows, athlete to push ball forward and release
3) For "wanderers," set foot markers or cones down as a starting spot

Progression Options:

1) Begin increasing distance between throwing partners
2) Increase speed at which ball is thrown and returned
3) Add movement, for example: squat and then push throw

6) Hurdle Step-overs

Hurdle step-overs help to develop motor planning, hip flexibility, and improved gait (take *that*, treadmill). I use these both in the PAC Profile assessment and as part of daily programming, particularly as a transitional activity between other exercises. I use both 1ft. And 6in high hurdles, and regress to cones placed sideways on the floor for younger athletes and/or those who cannot yet perform the movement with a taller hurdle.

Stand in front of hurdles

Step over first hurdle (can begin with either leg)

Hurdle Step-overs continued...

Continue stepping over first hurdle

Continue steps until all hurdles have been completed

Steps:

1) Stand in front of hurdles
2) Step over hurdles until all have been completed

Regression Options:

1) Lower hurdles
2) Fewer hurdles
3) Spot markers on floor instead of hurdles

Progression Options:

1) Higher hurdles
2) Jumps between hurdles

7) Forward Jumps

Jumping equals power, coordination, and being able to stabilize when landing. A fundamental play skills, proper jumping can and should certainly be taught. Many of my past Autism Fitness athletes could jump, but would land with their legs completely straight, something we want to avoid for foot, ankle, and knee health.

The landing part of jumping is just as, if not more important than the takeoff . I like to have my athletes start on softer (but stable) surfaces (gym mats, grass, padded floors). The forward jump is a valuable asset in both fitness and active play programming.

Starting position with feet on spot markers

Landing with knees bent, feet firmly on floor

Forward Jumps continued...

Steps:

1) Start with feet about shoulder-width apart (feel free to use spot markers)
2) Bend knees to slightly above parallel
3) Jump forward to either designated spot or "as far as possible"
4) Land with knees bending, feet firmly on floor

Regression Options:

1) Shorter jumps or simply jumping up rather than forward
2) Stepping down from a low box to teach "bending knees" on the landing

Progression Options:

1) Increase jump length
2) Increase repetitions (I only go up to about 6-8 forward jumps in a set)
3) Add a movement, for example: Catch the med ball, push throw, then jump and repeat 3x

8) Bear Walk

The Bear Walk has become one of my favorite exercise and active play activities. From developing hip flexibility, shoulder and trunk stability, and strength endurance, the Bear Walk provides a cornucopia of physical benefits. It does take some effective coaching to master, but the process towards independent performance of the Bear walk can build strength the whole way.

Start in quadruped position (knees and hands on the floor)

Pick knees up off floor

Bear Walk continued...

Begin walking forward

Continue by alternating feet and hands in crawling pattern

Bear Walk continued...

Extend hips/legs for full range of motion

Steps:

1) Begin in quadruped/all 4's position on floor
2) Raise knees off floor
3) Begin walking forward with hands and feet taking steps, upper body should be parallel with the floor
4) Bear Walk to designated area (usually 5-15 feet), return to quadruped position, and stand

Regression Options:

1) Some individuals may be averse to getting on the floor. A starting point may be to have knees on the ground or begin by placing hands on the floor and then standing up
2) Try short distances (2-4 feet), or just lifting the knees off the floor and holding the position for a few seconds

Progression Options:

1) Increase distance
2) Add "obstacles" such as cones so that the path is not completely linear

Programming

Putting all of this information and exercises together as a program is a balance between art and science. Of course, there is a science to art, but that is off-topic for this E-guide. Fitness programs for individuals and groups on the autism spectrum should ALWAYS:

- Begin with baseline abilities and activities that are appropriate for the participants
- Include activities that cover the foundational movement patterns (push, pull, bend, rotation, locomotion)
- Ensure that there is a task:reinfrocement ratio that benefits the athlete
- Progress and regress the activities as needed within the session
- Use behavior-specific praise to reinforce AND for teaching purposes
- Encourage appropriate, safe, exploratory/creative movement and activities

For more programming ideas, E-books, consulting, and more, visit www.AutismFitness.com

About Eric Chessen, M.S.

Eric Chessen, M.S., is the Founder of Autism Fitness. An exercise physiologist with an extensive background in Applied Behavior Analysis (ABA), and best-practices approaches to teaching the autsim population, Eric has spent over a decade developing and implementing successful fitness programs for his athletes. The creator of the Autism Fitness Toolbox and PAC Profile Assessment, Eric has merged the fields of fitness and behavior science in an approach that has seen many successes.

Eric has been featured in Yahoo News, and has contributed to numerous autism and fitness publications including Parenting Special Needs Magazine, The Autism Advocate, HowtoLearn.com, EliteFTS.com, and BreakingMuscle.com. He resides in Long Island, NY and is an avid Olympic Weightlifter and fitness enthusiast.