Finding Fitness

How (and How Not) to Create Exercise Programs for the ASD Population

By Eric Chessen, M.S., YCS – Summer 2010

My last group of the day includes six girls ranging from 12 to 15 years old. They huddle in the corner, attempting to figure out the best way to confuse me in some form or another.

I set up some low plastic hurdles and a 30-foot piece of fire hose. That may not seem the epitome of fitness equipment, but as the girls begin jumping over the hurdles, throwing the big medicine ball and swinging the hose so that it makes giant, blue waves across the room, it is pretty clear these are enjoyable activity choices. We finish with a slightly modified version of tag, as the concept of “it” and “not it” is often difficult for young people with autism. Game theory aside, fitness is an important foundation for quality of life for every individual on the spectrum.

I have had the experience of implementing many fitness programs and activities – some that have not worked too well, many that have – and I can now make a good distinction between the two. There is a lot of information, misinformation and confusion about fitness and autism, and I have spent a lot of time attempting to convince people that fitness is important for individuals with autism. I have also spent time educating parents and professionals on what fitness actually is, and how many physical education and sports programs fail to provide it.

The existing supporting research verifies the importance of vigorous physical activity for young people. There are significant cognitive, emotional/self-regulatory/adaptive and general physical benefits to being physically active. People derive preventative and productive results from regular physical activity, from decreased risk for Type II diabetes, cardiovascular disease and certain types of cancer to the enhanced self-esteem, strength and flexibility we develop in a well-structured physical fitness program. It is safe to conclude that fitness is beneficial for all populations. Unfortunately, through the popularity of fast food, sedentary lifestyles and decreased outdoor play, we have spent recent decades exploring the alternatives to fitness. According to most reports, this is not turning out well for our nation’s youth.

FITNESS GOALS FOR THE AUTISM POPULATION

The two biggest obstacles in promoting and introducing fitness to the autism population are accounting for the physical, cognitive and adaptive/self-regulatory issues common to people with ASD and selecting appropriate physical activities. I can put together the greatest series of hopping exercises, but if my athlete with autism cannot yet tolerate standing on two spot markers and making eye contact with me, this
exercise is not going to be effective or enjoyable.

Fitness programs for people with autism should have two main goals: to get the participants moving well and to make movement enjoyable. Much has been done to eradicate the idea and actual inclusion of play from the daily activities of children (and adults). Contrary to popular practice, true play does not involve a television or computer screen. Rather, true play encompasses creativity, imagination, initiative and vigorous, active repetition, all of which are vitally important skills. By vital, I mean something that refers to real life. But for young people with autism, play skills are often an area of difficulty.

**Learning Play Skills**

Children and young individuals with ASD often have a deficit in their imaginative or free play skills. Much gross motor development relies upon exploratory activities, including climbing, jumping, running, and variations of bending and squatting. When these behaviors do not emerge in childhood, there is an increased risk of muscular imbalances, low muscle tone and lack of initiative to engage in free play or movement activities. The deficit is widened due to today’s sedentary lifestyles, poor nutrition and few opportunities to participate in vigorous fitness activities.

I often structure my fitness programs as “structured learning for chaotic situations.” Play is chaotic; it is random, fun and an essential part of the human experience. Play is also a skill that can be taught using exercise as its components. For example, I have been working with “Frankie” for about six years now. We have focused on increasing both his tolerance of physical activity and performing multiple steps of an activity, such as picking up a ball, carrying it overhead and then throwing it. These are skills that may or may not be easily taught, but have a great role as “foundational” movement and play skills. During breaks from specific activities, Frankie will now pick up a SandBell (a rubber disc filled
with sand) and throw it around, or jump over the hurdles. He is beginning to incorporate movement into non-structured activities. The generalization component is enormously important.

Generalization

Generalization is the ability to perform a specific skill in a variety of situations. This is one of the limitations of sports activities. A sport, while certainly beneficial for a variety of physical, social and cognitive processes, includes a very specific set of skills. These sport-specific movements and activities do not generalize much to daily living skills or other athletic and play situations. There is a reason there are very few professional athletes playing more than one sport. Being good at baseball is not a prerequisite for being good at soccer, and being good at tennis is not a prerequisite for being good at football. These are all highly specified activities.

Consider general fitness and play as the roots and trunk of a tree. Sports are the branches. We do not need all of the branches in order to have a healthy, stable root and trunk system, but we do need those roots and trunk to grow solid branches.

General physical fitness – pushing, pulling, climbing, jumping and throwing – builds the foundation for success in specific athletic activities. It has been my experience that most young individuals on the autism spectrum are not exactly “jumping up and down” to play a team sport. (Many of them have trouble enough just jumping up and down, and some do it in excess.) However, even if they do not want to be part of a team, we must encourage them to be physically active in other ways. General physical fitness and play are not just the cornerstones of athletic success; they contribute to optimal functioning in a variety of areas. Therefore, it is important to consider individual goals and how they can be appropriately applied to a fitness curriculum.

APPROPRIATE FITNESS PROGRAMMING

From an educational and life skills perspective, our job as parents, teachers and professionals is to regularly identify an individual’s areas of need and address them in the most adaptive way possible. There is a reason so many students have difficulty in a standard classroom setting. The focus on taking tests rather than “learning how to learn” leads to skills that are not necessarily applicable to future needs and goals. For fitness programming, my hierarchy tends to look something like this (in order of importance):

1. Develop, maintain and enhance movement skills
2. Pair exercise and physical activity with reinforcement to ultimately make the activities themselves fun and part of a lifestyle
3. Increase initiation and creativity skills through exposure to various modalities of exercise (different equipment and activities)
4. Support socialization through small group activities that include elements of teamwork and helping behaviors

For those with autism who often have difficulty attending to a task for durations longer than 10 or 20 seconds, creativity and socialization behaviors are not an immediate goal. It is far more
beneficial to set up a progressive plan for participating in fitness activities for moderate durations of time, and introducing several modalities and movements. Most physical education or adaptive sports programs focus on a single modality or activity to the detriment of more general, global skills. One of the most common examples I have experienced is a parent or educator describing how they have their child running on a treadmill. My first question is, “Why?” The answer is usually, “Because it is exercise.” A pair of socks is clothing, but if I put them on and walked outside to get the garbage can off the street, I’d have some problems (and be uncomfortably cold). The point is that it is essential to include a variety of movements and activities for general fitness and physical development.

Types of Movement

For simplicity’s sake, I usually break movements into five primary categories: pushing, pulling, bending/squatting, rotation and locomotion. Developing a program around all five movement patterns is a great start to a well-rounded fitness program. The movements can be as simple or complex as the needs and abilities of the participant(s).
By categorizing movement categories, parents, educators, therapists and other professionals can develop balanced programs that are appropriate for any individual or group. Instead of focusing on a particular sport or individual muscle group (arms, legs, shoulders), movement-based exercise teaches the body to function as a cohesive, optimized unit. For example, upper-body pulling motions, from pull-ups to monkey bars to resistance band pulls, incorporate the upper back muscles, shoulders, arms and hands. In addition to developing strength and stability, these exercises can aid with posture. Have you ever told someone to “sit up straight?” The fact is that you cannot force good posture. It has everything to do with the proper muscle stability. Again, a program that includes pulling as a component, as opposed to walking on a treadmill for 40 minutes, has tremendous benefit for a variety of physical and adaptive abilities.

How do we put together a program that is suitable for an individual or group of people with autism? It is important to consider the participants’ current level of ability and tolerance for new activities or tasks. I have found much success with using animal-based movement patterns for mobility and movement assessment. Bear walks, crab walks, frog hops, gorilla steps and various improvised movements allow for creativity while exposing the athlete to multiple forms of the five fundamental patterns. Other favorites are hops, jumps, overhead carries with soft medicine balls or SandBells, a variety of throws and swinging long segments of rope. Many of these modalities would be considered non-traditional, but historically speaking, they have a far more embedded and proven place in physical culture than any machine or aerobics class out there today. They are also fun, inexpensive and conducive to providing fitness for any age or functional level.

Conclusion

It should be evident that fitness is far more important commonly acknowledged. Play and general exercise will always serve an important role for sport-specific athletes and those who do not engage in a specific athletic activity. I consider all of the individuals I work with athletes. They perform vigorous physical activity on a regular basis and progress in both their enjoyment and abilities within fitness. If our goal is to provide individuals on the spectrum with the abilities and opportunities necessary to succeed in both the short and long term (thereby enhancing their quality of life), then physical fitness must be included as a life skill.

About the Author

Eric Chessen, M.S., YCS, is the founder of Autism Fitness. In addition to working with his athletes on the autism spectrum, Eric consults with parents, educators, fitness professionals, and therapists around the world. He is the creator of the Autism Fitness Toolbox/PAC Profile Method and the author of several E-Books. For more information, visit www.AUTISMFITNESS.com and his blog, www.EricChessen.com.