

# Adaptive Sports and their Therapeutic Benefits

## A Guide for Adaptive Athletes



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## **What is Therapeutic Recreation?**

### **What is Therapeutic Recreation?**

According to the American Therapeutic Recreation Association, or ATRA, therapeutic recreation (also called recreation therapy) is a systematic process that uses activity-based interventions (such as adaptive sports) to assist with achieving optimal physical and psychological health, promoting injury recovery, and maintaining a healthy state of well-being in individuals with disabilities and/or varying medical conditions. It can be used in a variety of settings from community organizations to clinical settings and more!

### **How does Therapeutic Recreation apply to Adaptive Sports Iowa?**

In the context of Adaptive Sports Iowa, and the programs that we offer, the utilization of therapeutic recreation interventions takes the sports that we already offer and puts a purpose behind them, so that they provide athletes with more than just the fun of recreational and competitive play. Therapeutic recreation interventions focus on improving the quality of life for participants and allows them to get the most out of participating in recreational activities that they already enjoy. The practice of therapeutic recreation can be offered in an individual or group setting, though when offered in a group setting, it is usually tweaked slightly so that treatments are individualized to each client. Several clients can have the same goals, but likely wouldn't have identical treatment plans, even with the same diagnosis. In community therapeutic recreation programs, there are often multiple pathways that the CTRS and client can take to reach a variety of goals, all of which can be achieved in some way through participation in adaptive sports. Goals will look different depending on what type of functioning is the objective for improvement. Different types of functional improvements are more commonly seen in different populations, for example emotional functioning improvement is most commonly seen

in children, but functional improvements of all types can be seen with any population. Improvement of social and emotional function is focused more heavily on the child and adolescent population served by TR, and goals are centered around interaction with others, cooperation, leadership, self-advocacy, and communication. Social and emotional goals can be applied to adaptive sport participation by including the client in a team sport, and at times giving them a leadership position to encourage appropriate communication with others and fostering healthy leadership skills. Behavioral improvements are also focused on the child and adolescent population, and goals that the client may work towards include stress and anger management, self-respect, respect for others, and learning how to be a team player. TR programming focused on cognitive functioning strives to help clients improve memory, attention, problem solving and decision-making skills. Participation in adaptive sports can greatly increase cognitive skills because sports require athletes to make split second decisions, as well as having to remember the rules of the sport. The most common type of therapeutic recreation programming seen in the field of adaptive sports is physical programming. The vast majority of therapeutic recreation interventions utilizing adaptive sports will have some form of physical functioning goal. These goals can include improvements in balance, coordination, motor planning, skill level at a specific sport, strength and endurance training or fine motor skills. In most situations, clients have goals in multiple areas. For example, a client may utilize sled hockey to improve their balance, while also working on their communication skills and ability to work well with others. Regardless of the type of programming that is being implemented, all forms of therapeutic recreation interventions aim to improve the clients' quality of life and well-being, so that he or she can lead the best life possible.

## **The TR Process**

When working closely with a Certified Therapeutic Recreation Specialist (CTRS), clients will go through what is known in the therapeutic recreation (TR) field as “The TR Process,” or the APIE(D) Process. This is typically a 4-step process, sometimes including a 5<sup>th</sup> step depending on the setting that it’s being utilized in, or the preference of the CTRS or client receiving services. These steps are as follows:

**A: Assessment:** Clients will be assessed through observation, informal and/or formal assessments, or a combination of the three, based on their ability level and reason for involvement in TR. This is used to establish a baseline when setting goals that the client wants to work towards. Assessments can be formal written forms, observations or interviews, depending on the situation. In the context of ASI programs, assessment can be as simple as a self-assessment that an athlete makes, determining where they want to improve in a sport, or something more detailed, where an athlete may work with a coach to meet a certain goal in their sport.

**P: Planning:** The CTRS, usually in conjunction with the client, will create a plan on how to assist the client in reaching their desired goals. Plans can change throughout the course of a client’s time receiving therapeutic recreation services. The planning process often involves setting goals for participants, and objectives that can be used to reach those goals. Planning for athletes in ASI programs may look like planning to attend all practices to improve on their skill level or planning out the steps it may take to reach a particular goal.

**I: Intervention:** The intervention is the actual recreational activity that is being used for therapeutic health and wellness benefits. In this case, the intervention is going to be whatever adaptive sport that you participate in. Participation in the sport won’t be any different, but the

goals that have been set should be in the back of your mind as you play. Sometimes, specific drills can be utilized to focus on achieving a goal, while also improving the athlete's overall ability to play the sport.

**E: Evaluation:** At the end of a therapeutic recreation treatment, as well as periodically throughout the CTRS' time working with a client, the client will be evaluated on his or her progress towards meeting the goals that were set at the beginning of the treatment. This is just as much for the benefit of the CTRS as it is for the client. It allows goals and plans to be reevaluated and altered based on the progress that has been made so far. In more informal settings, such as the way in which TR is put into practice at Adaptive Sports Iowa, evaluations may be as simple as an athlete looking back on his or her practice or game performance, and figuring out what was done well, and what can be improved upon. The evaluations that are completed at the end of a treatment are typically slightly more formal than those done in the middle. Sometimes they require going back to an initial assessment and redoing it to measure growth, and other times the evaluation is independent of the assessment, standing alone.

**D: Documentation:** This is an optional step in the TR Process that is usually utilized by the CTRS for their own purposes in a more clinical setting, but it can be helpful in a community setting, such as at an ASI practice or Event, as well! Documentation of progress allows growth to be seen more clearly since there is a record of it. In the context of ASI programs, documentation may look like keeping track of drills completed at practices to work towards a goal or having video footage of a game to look back on in the future.

Utilizing the APIED process in the context of Adaptive Sports Iowa programs, or adaptive sport participation in general, may take a little bit of backwards planning, especially if the athlete has already determined the sport or sports, they want to or are already participating in.

In these situations, the “I” or intervention (the sport), has already been selected, which can limit the ways in which an athlete can work towards meeting certain goals. The process will be slightly different, as assessments will typically be more observational, and planning goals and objectives will be based around the athlete’s chosen sport instead of general goals and objectives leading to the selection of a sport. The last three steps of the process will proceed in a typical fashion. However, if an athlete hasn’t selected a sport yet, or is open to trying a new one, then the APIED process will be completed in a traditional order, with the athlete’s desired goals and objectives serving as the motivator to decide which sport is the best fit. Assessments may look like the athlete testing out a variety of sports and adaptive equipment, or it may look like assessing their ability levels in different ways, whether that’s through an interview with the athlete, or observation.

### **Therapeutic Recreation in Adaptive Sports: What does it look like?**

Therapeutic recreation practices are going to look different, depending on what sport or program they are being applied to. Utilizing therapeutic recreation practices in sports can be as complicated as setting multiple goals to improve gross motor skills or balance, but they can also be as simple as wanting to lead a healthier lifestyle, so they make it a goal to attend a specific number of practices or try various different sports throughout the year. Below is a breakdown of some of the programs that Adaptive Sports Iowa offers, and what TR looks like when put into practice within that sport. That being said, it is important to keep in mind that TR services are often individualized to the client. Additionally, this may be of help to an adaptive athlete who wishes to pursue an adaptive sport and is trying to improve his or her overall quality of life but hasn’t chosen a sport yet.

**Wheelchair Basketball:**

Therapeutic Recreation interventions on the court of a wheelchair basketball program are going to look a lot like they would in a standard basketball game. Athletes may utilize therapeutic recreation and the APIE process to become a better player, analyzing where they can improve, planning how to get to a high skill level, working on a variety of basketball drills, and evaluating their improvements. Taking a therapeutic recreation approach to wheelchair basketball could be used to improve a player's ability to throw and catch post injury. Skills that athletes would be able to improve include hand eye coordination, team communication skills, physical endurance, and core control. Wheelchair basketball may also be a good option for an athlete who is new to adaptive sports, as the rules and game play are similar to traditional basketball.

**Sled Hockey:**

Sled Hockey would be a good option for athletes looking to improve balance through therapeutic recreation interventions, as the equipment used can be adjusted for balance. A sled is constructed using ice skate blades along the base that can be moved further apart or closer together depending on the athlete's skill level in the sport and balance ability. When moving the sled, athletes are able to train antagonistic muscles, because of the way the sled is designed. In an everyday chair, athletes primarily use their biceps to push forward, whereas in a sled hockey sled, they have to use their triceps and back muscles to propel across the ice. Sled hockey can also be used to help improve an athlete's hand eye coordination. Improvements in hand eye coordination can lead to improvements in fine motor skills as well. An example of a therapeutic recreation intervention when playing sled hockey would be making it a goal for the blades on the



athlete's sled to move closer as his or her balance improves, with the actual intervention being a combination of regular game play and drills to improve balance and turning ability on the sled.

### **Beep Baseball:**

Beep Baseball is, at its most basic definition, baseball for blind and visually impaired athletes. The game definitely has a learning curve to it, even for athletes who have always lived with limited to no sight. Playing beep baseball with a therapeutic recreation approach would be smart for blind individuals who wish to become more connected to the blind and visually impaired community. Athletes have to be able to train the brain to improve auditory distance perception. This is the player's ability to perceive where the ball is in space and when to swing the bat. When applying therapeutic recreation to sports, the outcome doesn't always have to be something physical or sports related, and the beep baseball implication to TR are a good example of that. Beep baseball can help athletes foster a sense of community and belonging with other athletes in similar situations, while providing an outlet for recreational or competitive sports.

### **Wheelchair Tennis:**

Wheelchair tennis, much like wheelchair basketball, is very similar to how the traditional form of the sport is played. The therapeutic recreation process can be applied to wheelchair tennis to focus in on specific aspects of the game and make the athlete a better player, as well as improvements in hand eye coordination. Athletes have to learn how to maneuver the sport chair while still being able to watch the ball. Therapeutic recreation interventions in wheelchair tennis may look like goal setting to improve athletic ability, similar to wheelchair basketball, or even just making a commitment to get out on the court and play to stay physically active. Unlike wheelchair basketball, wheelchair users and non-wheelchair users can play together or against each other.

### **Air Gun Shooting:**

Adaptive Sports Iowa offers a Veteran Air Gun program, aimed at veterans, but open to both veterans and non-veterans with physical disabilities. All equipment is provided, and it is free for participants. Assistive devices are also provided for athletes if necessary. According to the National Rifle Association, participation in sports such as target shooting allows athletes to improve overall stamina and strength, while also encouraging a positive sense of success and security. A big part of air gun shooting is that each athlete must develop a way to control their breathing. This forces the athlete to slow down and time the shot appropriately to hit the target. The APIE process can be applied to air gun shooting in a sense of trying to improve an athlete's ability levels, or as utilizing the sport as something that the athlete enjoys to encourage the growth of a positive mindset and a sense of achievement.

### **Track and Field:**

Adaptive Track and Field equipment is offered through Adaptive Sports Iowa to middle and high school students at no cost, allowing students to participate in their school's track and field season with equipment on loan for the length of a season up to the length of a student's middle and high school track and field career. Much like Wheelchair Tennis and Wheelchair Basketball, therapeutic recreation practices can be put into place within Adaptive Track and Field to help the athlete become better at their event(s) of choice. Adaptive Sports Iowa provides both racing and shot-put chairs. Athletes participating in shot-put learn how to use the chair to their advantage when playing. Racing chairs require athletes to keep their body leaning forward while in the chair to avoid tipping backwards. Athletes also have to learn how to set a compensator which allows the chair to turn around the tight curves in a track.

### **Winter Ski Experience:**

Adaptive Sports Iowa's Winter Ski Experience is an annual 3-day event of training and the chance to run through a downhill skiing course that takes place every February. It is targeted at athletes with physical and/or visual disabilities, but anyone can participate. This experience would be beneficial to novice and more advanced athletes alike, as training opportunities are provided but not required. Participants will get to learn about adaptive ski equipment and appropriate skiing technique. When applying a therapeutic recreation lens to this experience, participation will allow clients the opportunity to improve balance, bodily awareness in space, and working with others. They also will be able to learn and/or improve proper skiing technique. Like most ASI programs, the Winter Ski Experience is free for participants, with a free will donation suggested.

**RAGBRAI:**

Adaptive Sports Iowa offers the only adaptive cycling team to participate in RAGBRAI. The current team has over 80 riders, with at least 30 having some form of a physical or visual disability. RAGBRAI is an endurance event, and riders must be prepared, with the ability to self-propel or physically assist in propelling a cycle (such as on a tandem bike). Accessible transportation to the start and finish lines from Des Moines and back will be provided, as well as accessible overnight accommodations. Athletes are required to bring their own bikes and necessities for the event, though a packing list is provided. A training schedule can also be found on the Adaptive Sports Iowa website. Therapeutic benefits of participating in RAGBRAI include the social benefits of participating in a team event, improvements of physical health through staying active, as well as the emotional benefit of a sense of accomplishment when crossing the finish line!

## **Resources**

<https://www.brainline.org/treatment-hub/adaptive-sports>

<https://www.nctrc.org/about-nctrc/about-recreational-therapy/>

<https://www.youtube.com/user/adaptivesportsiowa/videos>

<https://confessionsofarectherapist.com/the-apie-process/>

<https://www.nwba.org/>

<https://www.adaptivesportsiowa.org/>

## References:

- About Recreational Therapy - American Therapeutic Recreation Association.* (n.d.). Wwww.atra-Online.com. <https://www.atra-online.com/general/custom.asp?page=AboutRecTherapy>
- Adaptive Sports Iowa. (2011). *Home*. Adaptive Sports Iowa; Adaptive Sports Iowa. <https://www.adaptivesportsiowa.org/>
- Adaptive Sports Iowa. (2018, September 28). *Wheelchair Track and Field Education Series - YouTube*. Wwww.youtube.com; Adaptive Sports Iowa. <https://www.youtube.com/playlist?list=PLjEZrU8TkHkjUfqdfgZc59Dm6SXQ0E-hX>
- Beep Baseball is the Sound of Summer.* (2020, July 23). IBVI; Industries for the Blind and Visually Impaired. <https://ibvi.org/blog/beep-baseball-is-the-sound-of-summer/>
- Dixon, C. (n.d.). *Adapted Wheelchair Tennis*. Wwww.recreationtherapy.com. Retrieved February 4, 2022, from <https://www.recreationtherapy.com/tx/txtennis.htm>
- Frisina, C. (2021, June 2). *Adaptive Sports, Therapeutic Recreation & Other Frequently Asked Questions*. Cerebral Palsy Foundation; Cerebral Palsy Foundation. <https://cpresource.org/topic/exercise-sports-recreation/adaptive-sports-therapeutic-recreation-other-frequently-asked>
- Jackie. (n.d.). *What is hand-eye coordination?* Wwww.edplace.com; EdPlace. Retrieved February 4, 2022, from <https://www.edplace.com/blog/send/what-is-hand-eye-coordination>
- National Beep Baseball Association. (2018). *Beep Baseball in a Nutshell Introduction*. In *National Beep Baseball Association* (pp. 1–5). National Beep Baseball Association. <https://www.nbba.org/wp-content/uploads/2018/02/BeepBaseballInANutshell.pdf>
- Shooting, A. (n.d.). *Adaptive Shooting*. Adaptiveshooting.nra.org. Retrieved February 4, 2022, from <https://adaptiveshooting.nra.org/>

*Sled Hockey Rulebook and Guidebook.* (2019). Wwww.usahockey.com.

<https://www.usahockey.com/sledrules>

*What is Wheelchair Tennis?* (2017). Wwww.rookieroad.com.

<https://www.rookieroad.com/tennis/wheelchair/>