

Team River Runner

Adaptive Paddling Primer



Introduction

Team River Runner’s goal is to aid the recovery of any healing veteran. Our interpretation of a healing veteran is extensive and open. We are inclusive. Many of our veterans have incurred physical, cognitive, and emotional impairments from service to our country. Many of our participants have been in a healing mode for many years, progressing thru life. We are proud that we are open to helping all veterans, regardless of when or how they incurred their disability. Introducing paddling, and in particular adaptive paddling, to individuals with disabilities is extremely rewarding. With a little knowledge, some creativity and empathy, we can introduce any individual to the sport of paddling. This involves recreational kayaks, whitewater kayaks, stand up paddle boards and rafting.

The world of adaptive paddling can appear daunting at first, to both the participant as well as the instructor. As instructors, we all have the fear of “doing

something wrong,” or of injuring an individual. This is easily overcome. The American Canoe Association (ACA) offers Adaptive Paddling Workshops (APW) that provide the foundation for instructors to provide safe paddling opportunities. TRR volunteers and veterans are encouraged to take this course. Doing so will greatly enhance you as an instructor!

Busy work schedules and the availability of courses can make it challenging to take an APW. Over our eleven operational years, TRR volunteers have benefited from taking the course. TRR collectively has learned much over the years, and can provide assistance to our chapters. Below is a brief TRR primer and introduction to adaptive kayaking. This is not intended as a replacement of ACA instruction but rather to serve as an “informational starting point”.

It’s helpful to understand what disabilities adaptive paddling can assist. The ACA’s Adaptive Paddling Instruction Book, *Canoeing & Kayaking for People with Disabilities*, details many disabilities, and is a good reference. If you don’t have a book and require one please ask the TRR staff for one.

Disabilities can be categorized into two categories: physical disabilities and intellectual/cognitive disabilities. Physical disabilities result from amputation, spinal cord injury, Cerebral Palsy (CP), Spina Bifida, Traumatic Brain Injury (TBI), and other physical function-limiting conditions. Physical disabilities can be congenital or acquired from trauma. Some physical disabilities, such as CP and TBI, can also lead to cognitive impairment. With the correct adaptations, many people with physical disabilities can fully enjoy paddling, and if desired, be able to compete.

Cognitive disabilities can be congenital or acquired. Acquired cognitive disabilities result from trauma and/or from environmental exposure to hazardous materials, such as lead and fetal alcohol. As volunteers, this is not something we are likely to encounter within our veteran population. Cognitive disabilities include: Down Syndrome, severe TBI, Autism Spectrum Disorder (ASD), intellectual developmental disorder, and other cognitive function-limiting conditions. Most of our encounters with veterans having cognitive issues are a result of Traumatic Brain Injury from blunt force trauma.

Many veterans are living with Post Traumatic Stress(PTS/PTSD). This anxiety disorder can be acute or chronic, and can have disabling consequences. PTS

categorizes as neither a physical disability nor a cognitive disability. Nevertheless, PTS is a potentially disabling mental health condition that can result in depression, alcohol/substance abuse, and additional anxiety disorders.

In summary, most of the veteran population we work with suffer one or more of the following: Post Traumatic Stress, Traumatic Brain Injury, Substance abuse, Visual Impairment, Muscular degeneration (MS, ALS, Parkinson's), Diabetes, Loss of or loss of use of limb due to trauma, and Spinal Cord injury.

Summary — Introduction

- **Paddling can greatly assist veterans in healing, by providing physical exercise, emotional well-being, and social interaction**
- **By becoming knowledgeable, volunteers can overcome fears about “doing something wrong”**
- **Become knowledgeable by reading the ACA Adaptive Paddling Instruction Book, *Canoeing & Kayaking for People with Disabilities* and taking an ACA Adaptive Workshop**
- **Disabilities are either physical or cognitive, and both can be addressed to add a positive paddling experience to the participant.**
- **Nearly all physical disabilities can be compensated for with adaptive paddling gear, to include: pontoons for added stability; lateral and back support for support and stability, adaptations for arm and leg amputations, and adaptations for weak or non-operating hands and wrists.**
- **Traumatic Brain injuries account for most cognitive issues that we encounter**
- **Many veterans are living with Post Traumatic Stress**
- **Most of the veterans we help have at least one of the following: TBI, PTS, or Physical Trauma Injuries (amputation, SCI, Visual Impairment), and, to a lesser extent, Neurologic diseases like MS, ALS, & Parkinson's.**

Instructor's attitude and approach

Each individual we work with is unique. Our job as instructors is to adapt what we teach, how we teach, and the equipment we use, to match each individual and their unique situation. For example, a participant with a high level spinal cord injury will not be able to rotate their torso. Adapting our instruction, we encourage a paddling technique that uses more of the arms to paddle and deemphasizes the torso rotation traditionally taught to new students.

Instructors should consider adapting the equipment, teaching style & techniques, and choice of paddling venue. However, participants must ultimately choose for themselves whether to adapt their own learning style and attitude. As instructors, our job is to create a safe environment and present learning opportunities.

When instructing there is a tendency to rush toward providing equipment and instruction. This is especially true when providing adaptive instruction. The most important consideration for all adaptive sports starts with considering the environment. The environment conducive to learning needs to be comfortable and free of avoidable hazards. The paddling venue should be sheltered and relatively free of hazards on shore, as well as in & on the water. It is often best to introduce new paddlers to the sport in a pool instead of outdoors. Venues like a pool guarantees comfortable air & water temperatures, are relatively free of hazards that enhances learning.

It is helpful to remember that this is their paddling experience. We may have some experience based on what we have been exposed to, about what works, and what does not, however, working with a participant involves **teamwork**. Think of yourself as a team member with a partner. The goal should be that they have a safe, pleasurable experience. As an instructor, be a teammate in the whole experience. Explaining to your teammate what they might experience can help alleviate their anxiety. Have them choose what they want to do, and what they hope to get out of the experience.

Your role is to provide safety and fun. Many individuals with disabilities find a freedom in paddling that may be otherwise lacking in their lives. It is important to help them get comfortable with the whole new world. Smiling a lot

really helps, as does being confident and knowledgeable. Being keenly aware of how your partner is feeling is helpful. Do your best to walk that fine line between being knowledgeable and confident, versus authoritarian in nature or overconfident. Ask a lot of questions of your teammate. Some things may be obvious to you, while others may not. Good questions to ask before the session include:

- Are you comfortable in water and do you like to swim?
- Do you mind getting wet or would you rather not?
- Have you paddled before?
- What mobility issues do you have?
- Do you have any loss of sensation or feeling?
- Are you overly sensitive to heat or cold?
- Do you need to use the restroom before we start?

As part of the safety aspect, there are considerations or requirements that the participant must meet. These are established by the ACA and are referred to as the **Essential Eligibility Criteria (EEC) for Paddlers** (Additional specific requirements may be required for coastal and whitewater outings)

The participant must be able to:

- Breathe independently (i.e., not require medical devices to sustain breathing)
- Independently maintain sealed airway passages while under water
- Independently hold head upright without neck / head support
- Manage personal care independently, or with assistance of a companion
- Manage personal mobility independently, or with a reasonable amount of assistance
- Follow instructions and effectively communicate independently or with assistance of a companion
- Independently turn from face-down to face-up, and remain floating face-up while wearing a PFD
- Independently get in/out of a paddle craft or with a reasonable amount of assistance*
- Independently get out and from under a capsized paddlecraft*

- ❑ Independently re-enter the paddlecraft following deepwater capsize or with a reasonable amount of assistance
- ❑ Maintain a safe body position while attempting skills, activities, and rescues listed in the appropriate Course Outline, as well as have the ability to recognize and identify to others when such efforts would be unsafe given the participant's personal situation*

Summary — Instructor's attitude and approach

- **Each individual is unique, and we as instructors need to adapt to that person**
- **Consider first: creating a comfortable learning environment free of hazards**
- **Perform your role as a teammate. Work as a team. Have fun!**
- **Do not drive the participant to *your* goals. This is about enhancing *their* experience.**
- **Ask questions to learn about your partner's background and what they are comfortable with.**
- **Be aware of, and use, the ACA Essential Eligibility Criteria for Paddlers**
- **Be upbeat, smile a lot, and steer away from being "the expert"**

Post-Traumatic Stress (PTS/PTSD)

The largest majority of veterans TRR services suffer from Post-Traumatic Stress, or 'PTS' (Also Commonly referred to as Post Traumatic Stress 'Disorder'(PTSD). Unless they have suffered additional physical trauma, these participants require little to no physical adaptations of equipment. Mobility is likewise usually not a factor, generally making this an easier population to *handle* [Consider "work with", instead] physically. However, PTS can require extreme patience on the part of the instructor. Adapting to PTS requires a strong consideration of the paddling environment, the expected duration of the instruction, as well as instruction techniques. There are individual prep sheets to help you, available on the TRR website, under adaptive resources; please refer to these. Above all, remember to go slow in your instruction, don't overload the

veteran with unnecessary dialogue, have patience, and focus on one point at a time. Finding a calm, quiet environment free of loud noises will be advantageous to creating a good learning environment.

Summary — Post-Traumatic Stress

- **Many veterans suffer from PTS, and its debilitating effects**
- **Be aware and patient, providing slow and consistent instruction**
- **Pick a calm, quiet environment to work in; free of loud noises.**
- **Instruct in short durations and intensity**

Traumatic Brain Injury (TBI)

Some of our veterans suffer from Traumatic Brain Injury (TBI). In some instances a veteran may suffer from both TBI and PTS. Participants with TBI will have unique challenges depending on what part of their brain was damaged. On the more extreme end of the spectrum, a veteran may suffer balance issues while walking as well as sitting. Special adaptation to add stability to the kayak may be required. *(For more information on providing better stability, See below under spinal cord injuries.* The veteran's speech can be affected, as can their vision. Do not assume just because a participant's speech is affected that they don't —or can't— understand you; this is a common trap novice instructors fall into. Most often, TBI can affect memory, which might require a slower progression in instruction. Teaching someone with TBI can require patience on the part of the instructor. Use the review process often ; at the end of each lesson and again starting the follow on lesson. As with PTS, we also have individual prep sheets regarding TBI to help you, available in the Adaptive Resources section of our website. Please refer to these.

Summary — Traumatic Brain Injury

- **TBI creates unique challenges of various degrees for sufferers**
- **TBI can affect physical, cognitive, speech, vision, balance, and mood**
- **Requires patience, and consistent, focused and slow delivery instruction**
- **Like PTS, instruct in brief durations avoiding long exhausting sessions**
- **Provide a review at the end of the current lesson and again at the start of the follow on lesson**
- **Provide regular praise and encouragement.**

Substance Abuse

Veterans with a history of substance abuse are ALWAYS in a healing mode, since they are constantly tackling their health issue. TRR has many veterans who are meeting this challenge head-on every day. Our goal is to promote a healthy, healing environment and the power of the outdoors, and participating in physical activities such as paddling have been proven to contribute. Unfortunately, so rarely is addiction discussed as a disability within the adaptive sports community, that many of the factors to consider for adaptive kayaking don't apply to this group of paddlers. But it should be. Being aware that your participant is — yesterday, today, & tomorrow— susceptible to substance abuse is important in your role as an instructor. Many individuals with substance abuse are high achievers and require goals and milestones, sometimes more so than others. Presenting realistic challenges and milestones for them is healthy. Be careful that these goals are measured and appropriate for their current skill level. What do we adapt? As always, first consider the environment —Specifically, the post-paddling environment.

For example: you may want to forego the “bootie-beer” tradition practiced by some whitewater boaters. Additionally, organizing a group trip to one of the large booze-soaked paddle fests might need some re-evaluating. Some TRR chapters operate 100% alcohol-free. Those that do not, encourage a low-alcohol profile, per TRR-National policy. Be considerate of not creating or condoning an environment that is unsupportive to their daily challenges and goals.

Summary — Substance Abuse

- **Veterans dealing with substance abuse face the constant challenge of abstaining**
- **Realize that they are often walking a tight line of coping**
- **Help present realistic and achievable paddling challenges for them.**
- **Offer substance-free environments without making the veteran feel like an outcast**
- **Be supportive without being invasive**

Spinal Cord Injuries (SCI)

Spinal Cord injuries presents one of the greatest challenges for adaptive instructors. Not only are we using adaptive kayaks and equipment, we are additionally hands-on being involved in the transfer of the veteran to the kayak, as well as launching the kayak. The transfer presents the potential to injure someone by dropping them.

Transfers are not difficult if learned and practiced properly. Transfers are much easier with the use of a transfer bench/transfer blanket, and practice. Each transfer is unique depending on the veteran and the extent of their injuries. The veteran usually has a preferred way of moving, as well as one side of the body that may be stronger than the other. Ask them if they have a preferred way of moving or transferring. It is critical to have someone who is experienced in transfers leading and directing the transfer. Some individuals in wheelchairs will be able to completely move themselves with little to no assistance while others may require a transfer involving 5-6 people. It is critical to have someone that is experienced in transfers leading and directing the transfer. Who is qualified? Ideally, someone who has completed the ACA adaptive workshop and has practiced many times.

If you don't have experience in this area, you might consider asking an occupational, physical, or recreational therapist to attend. Check to see if there are any other adaptive nonprofits in your area which may have experienced personnel. There are videos on our website of actual transfers. No matter what,

always talk every step through so everyone knows what to expect and **go slowly**. Over-communicating when doing transfers is better than assuming everyone knows what is about to happen. Continuously look to ensure the transferee has support around them to keep them stable. Before touching anyone, always ask if doing so is alright with them -unless it's an instance where they fall if you don't.



Recreational kayaks can be adapted cheaply with the right knowledge and foam to accommodate SCI. Depending on the extent of an injury, foam support can be built up from the cockpit to provide lateral and back support. The ACA APW spends considerable time on this topic.

Adding outriggers to the back of any boat greatly adds stability to the kayak and reduces the chance of the kayak tipping over (Note the use of the word “reduces”). Kayaks with outriggers *can* be tipped over. Do not be lulled into a false sense of security when using outriggers; they should only be used in a pool or warm lake where a participant can be easily and quickly towed to shore by hanging on to the back of your boat. In a cold-water —or even cool-water— environment, if you have an individual with mobility issues who tips into the water, and is unable to perform a deep water re-entry, you may have a serious problem that could very quickly become life-threatening.

In the past, outriggers have been made by doing something as simple as adding a few 2-Liter bottles and a couple of attachment sticks. Any individual with stability issues can be assisted by using outriggers. Besides building a DIY adaptive kayak for SCI, there are commercial adaptive kayaks available with these features that TRR can purchase. These kayaks are fairly inexpensive and

provide the ability to quickly adjust the seating, back and lateral support as well as having adjustable outriggers. See www.CreatingAbility.com.



Inflatable kayaks can work very well for some participants whose injuries are low on their spine and do not require lateral or upper back support. The center of gravity is lowered, greatly assisting balance. Many SCI veterans have paddled Class III-IV water successfully in inflatable kayaks.

Much like transferring an individual into and out of their wheelchair to a kayak, careful consideration must be taken when moving their kayak into and out of the water. The lack of stability of many SCI participants contributes to a lack of stability when you are moving their kayak on and off the water. Always have a volunteer standing in the water for launch and recovery of an adapted kayak. Another nice adaptive device available on the market is a two wheeled chariot. It holds the kayak and person, provides great stability and will roll easily in and out of the water — even in sand!



Summary — Spinal Cord Injuries

- **Ask the participant how they would like to transfer**
- **Using a transfer benches can often be of great assistance**
- **Its best to learn and practice transfers before actual doing them**
- **Outriggers can provide greater stability to a kayak if required as can lateral body support**
- **If a participant is in a wheelchair, added stability from pontoons on a kayak starting out, can create a positive experience**
- **Outriggers can be “homemade” with 2 liter bottles or purchased as part of an adaptive kayak with lateral and high back support**
- **Use outriggers in pools or warm lakes. They can still tip over.**
- **If journeying a distance or on cold water make sure the participant can perform deep water reentry**
- **Be careful moving a participant on and off the water. Investigate using a chariot.**
- **Inflatable kayaks are a great option for low back SCI. Many SCI participants fully enjoy using inflatable kayaks and paddle class 3 water**

Visual Impairment (VI)

TRR is taking the lead in introducing visually impaired veterans to paddling. We currently hold four-five clinics a year for visually impaired veterans. There is a whole spectrum of visually impairment: from a slight loss of vision to total loss. Some individuals may have only peripheral vision while others can see only that field of view directly in front of them. When working with any person with visual impairment, ask them if they have any vision, and if so, to what degree. Capitalize on any vision they do have by attempting to stand in that spot as you talk to them. This can be used while paddling as well. If they can see you on the side, position your kayak where they can see you. If they can't see your face or your movements at all, make sure to turn and face them and use some voice projection.

As always, It's great to use a pool or very sheltered area such as Class I water to introduce paddling to your participants. Be cognizant of the walking surface

moving in and out of the area. Offer assistance to help guide the veteran. Ask before touching them. Describe the area and ground you are going to walk over. Comments such as, “the ground gets rough here and is starting to slope downward,” will be appreciated, as will, “we are about 10 steps [or 10 yards] from the water.”

Guide the new participants to the kayak and let them feel it from bow to stern so they can visualize the shape of the boat. Do the same for the paddle and pfd, too. Have them sit in the kayak on the ground before getting in the water. Describe basic strokes and have them hold the paddle while you move the paddle thru the correct arc for the paddle. Have them feel the edging and support lines on the kayak.

Creating/marking reference points for visually impaired individuals are important. Taping a slim dowel, a short pencil or a popsicle stick to the paddle shaft where the control hand grips the paddle provides a constant reference point for the participant’s hand. With this small adaptation the participant will quickly realize where to correctly grip the paddle. Without it they may hold the paddle upside down or backwards.

One nifty trick to start acclimating a visually impaired individual is to have them get in the water and have them swim to your voice in the pool by saying “on me”. Say this in a steady, constant voice so they can hone in on your voice. The next step is to try this in a kayak while in a pool or lake. Position your kayak at their one o’clock position and lead them by saying “on me. Add comments such as “move to your right or left” as they advance in skills. TRR has had many visually impaired veterans learn how to roll and paddle whitewater. And our famous Lonnie Bedwell has run the Grand Canyon not once, but twice, from top to bottom – so, anything can be done!

Speak to the positive: as in, “move this way” versus, “don’t do [such and such].” Visually impaired participants appreciate being updated on where they are in their paddling journey and how much longer the trip will last. Don’t forget to offer comforts; water or restroom breaks. TRR has some video of Lonnie introducing paddling on our website under “resources”. The best option for a veteran who wants to advance is to attend one of our Outtasight Clinics for visually impaired veterans.

Summary — Visual Impairment

- **Ask the participant what, if any vision they have and, as an instructor, work to use it to your advantage. Many have some vision to a degree.**
- **Be aware of turning your head towards the participant when talking**
- **Ask them if it is ok to assist/touch them, before doing so**
- **Explain the paddling environment and describe the ground surface if they are moving across it**
- **Move any hazard in the area they might trip over**
- **Visual Impaired participants require the use of feel and sound more, with reference points.**
- **Tape a reference stick on the paddle where they will grip, so the paddle is aligned correctly fore & aft, as well as up & down**
- **If this is their first paddling experience, have them sit down and feel the kayak and paddle**
- **Use a pool the first time or two. Practice having them follow your voice by giving the command, “on me”**
- **Give positive commands, not negative ones, such as, “don’t go right”**
- **Clear concise communication is fundamental. You will often have to give mirror commands, so slow down; think of their right or left when giving commands.**
- **Visually impaired veterans have shown they can paddle any venue of water, even the Grand Canyon!**

Muscular Degeneration

We are seeing more of maturing veterans who have muscle control issues resulting from Multiple Sclerosis, Parkinson’s Disease, or ALS. Some are ambulatory while others use a wheelchair. Many have close to full mobility and can easily get in and out of a kayaks while others may need a full transfer from wheelchair to kayak. The unfortunate reality is many individuals’ diseases have progressed too far , and paddling is just too strenuous for them and too much effort to do on a routine basis. However, modern medicine is holding off this progression longer and longer, allowing those affected to enjoy activities such as

paddling. The key is to ask what help they require? Some participants can enjoy paddling in recreational kayaks with back rests and lateral support. If they arrive at the venue in a wheelchair start the session with pontoons to add stability. And watch and see if they might progress from using them. More advanced stages will require additional back and lateral support.

Summary — Muscular Degeneration

- **We are encountering more veterans with MS, Parkinson's, and ALS**
- **Participating in a kayak program can be very advantageous in increasing the quality of life for someone with this diagnosis**
- **As these diseases progress, balance and walking becomes more difficult often requiring assistance**
- **Modern medicine is keeping many more ambulatory longer and able to enjoy paddle sports**
- **Participants may require some back and lateral support in kayaks, as well as pontoons.**

Outfitting for Lower Extremity Amputations

When outfitting a whitewater kayak, sea kayak, recreational kayak, surf kayak, surf ski/wave ski, or other paddle craft to fit a lower extremity amputee, the goal is to achieve symmetrical hip alignment fore and aft when the paddler is in an otherwise ideal body position inside the kayak. Since a portion of the leg or legs will be missing and the residual limb(s) will not be of equal length, outfitting must be placed inside the kayak to provide a solid contact point/anchor point for the residual limb(s) to push against. If the kayaker can push against a solid anchor point harder on one side, then their hip will shift forward on the opposite side. Paddling with one hip forced back against the backrest and the other hip shifted forward will create significant back problems over time.

Since residual limb lengths will be different, the anchor point will need to be farther forward or aft on either side to result in symmetrical hip alignment against the seat-back or back-strap. A single leg amputee can use the factory pedals or

adjustable foot-plate as the anchor point on the side without amputation. Anchor points can be created out of blocks of closed cell foam or any other similar material. For the above knee amputee, TRR developed a simple solution with a plastic trash can cutout which is wrapped and attached inside the kayak, just forward of the seat, which the limb can slide into. The wrap is attached to the thigh-brace with 2 bolts, or sturdy zip ties. National staff can provide more detailed instruction if this is desired. Commercial products, made by Creating Ability, exist for both the above- and below-knee amputee.

All anchor points must be attached with either gorilla tape, Marine Shoe-Goo, 3M 4200, or something equivalent so the anchor point can resist the kayaker pushing against it with his or her residual limb. If anchor points come loose during dynamic forces, they can then become a wedging entrapment hazard, so a quality attachment is critical for safety.

Once the anchor points are properly fit into the kayak, the paddler should be as functional inside the kayak as anyone else. From rolling and edging, to strokes and maneuvers: nothing should be different for the amputee than for any other paddler (regardless of the type of kayaking).

You can add a small amount of weight to the bow to compensate pitch trim due to the altered weight distribution fore and aft. It is recommended to dedicate the first aid kit, spare water bottle, or something useful to have along for the day for this purpose. It makes little sense to use something you will not need on the water.

A nice final touch is to bring an extra gallon or two of clean water, so the paddler can rinse any salt and sand off the residual limb before putting his or her prosthetic back on.

Other considerations to make the paddler aware of include: skin protection of the residual limb, isolation of the Peroneal Nerve in below knee amputees, how to ambulate / terrestrially self-rescue if separated from the boat, and risk of loss if the prosthetic is brought along for extended journeys.

Safely exiting the kayak is always of the highest concern. Make sure there is nothing that might come loose, that there are no straps inside that might entangle a foot. Paddling with a prosthetic is dependent on the type of prosthetic

and the anchor point. As a rule, we tend to discourage the wearing of a prosthetic device that ends with anything “foot-shaped” when sitting in a kayak’s cockpit (sit-on-top).

Summary — Outfitting for Lower Extremity Amputations

- **The loss of part of a limb will shorten one leg causing the loss of a normal anchor point and an asymmetrical hip.**
- **Whether a below the knee or above the knee amputation, an anchor point can be created to force the hip back into its natural position and alignment.**
- **There are a variety of anchor points that can be created. Call or ask for help. But ensure they are secure to the kayak, won’t come loose, that there are no items that could hinder exiting the kayak.**
- **With proper adaptation a participant can fully edge a kayak and as well as roll one.**
- **Many veterans with leg amputations enjoy the freedom of paddling. The challenge can be moving across terrain to get to the river, getting off the river or getting a kayak back to the veteran if they take a swim.**

Adapting for Upper Extremity Amputations

Participants with arm amputations also are able to enjoy paddling, even extreme white water. Amputations below the below tend to be easier to adapt. There are commercial devices that allow a connection between the participants arm prosthetic and the paddle. These are secure solid adaptations that work well. The hammerhead device is one such adaptation that works well.

Above the elbow adaptations are also available but require more finessing. A around the neck, chest harness may be required to hold an adaptation in place. If this issue is encountered a recreational therapists will likely be required for assistance.

Summary — Adapting for Upper Extremity Amputations

- Adaptive gear for both below- & above- elbow amputations are available
- Below-elbow can be fairly easily outfitted, usually with a Hammerhead.

Hand and Wrist Adaptations

Individuals with weak fingers or hands can be assisted by adaptations to a paddle to help secure a tighter grip on the paddle. In the short-term, a 6-8 inch piece bicycle tire tube can be cut and secured to the paddle with tape on either end of the tube. This allows the palm to slide in under the tube and rest against the paddle shaft. The participant can easily learn to push pull the paddle in a motion that will propel the kayak. This provides a very inexpensive and structurally sound adaptation. Again, there are commercial products available that offer the same function.

For individuals with little to no grip or function in their hands, there is a system available that allows a band to be placed on the wrist that can slide into a paddle adaptation.



Some individuals have motion only on one side of their upper body or the use of only one arm. There is a wonderful adaption, the pivot point, which allows any individual, with some practice, to propel a kayak. (See Creating Ability.)



Final Preparations

As you prepare for providing your first adaptive session, develop a picture of the person you will be working with. Will they require any physical adaptations to either the kayak or SUP? Are there mobility issues? Adaptive kayaking through the use of adaptive kayaks with outriggers, back and lateral support, seating systems, adaptive paddles and amputee adjustments can largely assist participants.

Besides adaptive equipment, a large dose of common sense can be of assistance. Moving from the pool to outside venues brings in a whole other set of variables. When we go kayaking we should always be cognizant of potential weather, air and water temperatures. Taking any individual with the above issues warrants even deeper scrutiny of the paddling environment and employing risk management. This is NOT intended to be a comprehensive list of things to consider. However, always ask yourself, “is the environment the right one today for the person I am taking out? Can they self-rescue? How qualified am I to rescue them? Do I have help, and is that help actually up to the task of helping? Do I have a paddle plan, and have I made sure the duration is not too challenging? Does the paddler have the right paddle clothes? Do I have an “out” if things go wrong? Do I have a way to communicate for medical assistance?

A couple of hard-learned lessons: when paddling on a lake, paddle along the shore versus across the lake. Carry something for towing another kayak & tired individual. Carry some sort of snack that can provide a boost to energy. If

paddling 'out & back', paddle into the wind first so it's at your back on the way back. **Choose only a venue where you know you can either get someone back into the boat from deep-water, or get to shore quickly, and —most importantly— do so without injuring them.**

This document is only intended as a primer, and should be used as a quick source to realize there are solutions available to create new paddling opportunities. Please pursue further training and prepare. Normally, this is where I would say "good luck," but teaching any adaptive sport is more about being educated and prepared.

References:

www.aca.org

www.creatingability.com

2016