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ADAPTIVE SPORTS

– SPORTS GUIDE 101 –

– ARCHERY

POTENTIAL VOLUNTEER ROLES –

Roles you may be seeing and/or doing:

- **Set up** targets on pads at specific distances & locations
- **Knocking and retrieving arrows from target**
  - **listen to the Safety Whistle System *listed below***
- **Assist athlete/group with shooting arrows (if needed)**
  - **problem solve different strategies and techniques to modify their shot**
  - **ask Sportable staff if you have questions on how to enhance the athlete's experience**
- **Breakdown session**
  - **collect and store targets, arrows, and bows**
  - **place chairs and targets into storage**

SAFETY WHISTLE PROTOCOL :

1 tweet = **athletes are good to shoot at targets**
2 tweets = **ready to shoot**
3 tweets = **no shooting, clear shooting path; staff or volunteers pick up arrows to give back to athletes**

DIAGNOSES TO EXPECT –

Our athletes that participate in archery present with a variety of diagnoses, but not limited to:

- **Traumatic Brain Injury**
- **Spinal Muscular Atrophy**
- **Multiple Sclerosis**
- **Spinal Cord Injury**
- **Amputation**
- **Post CVA (Stroke)**
- **Cerebral Palsy**
- **Visual Impairments**

ADDITIONAL EDUCATION ON DIAGNOSES

EQUIPMENT –

Chesterfield County Parks & Recreation will provide equipment necessary including:

Compound Bows = this type of bow uses a pulley system, is easier to pull back, and is shorter, ideal for seated archers

Arrows and quivers = these hold athletes' bows for easy access!

Arm guards = these are worn on athletes' forearm for added protection

Finger tabs/gloves = protect fingers when pulling back bowstring

COMMON ADAPTATIONS –

Active Hands gripping aids can be utilized to maintain grasp on the bow for individuals with reduced hand function

Bow stands can be used to hold the the bow in place for athletes, only requiring the athlete to pull back the string to shoot

A **variety of release aids** can be used to release the bowstring

- **Shoulder mounted release aid**
- **Thumb release aid**
- **Mouth tabs**
- **Caliper release aid with wrist strap**

SCHEDULE & VOLUNTEERING –

Meet at designated location 30 minutes prior to start of archery session (check email to confirm time)

- **Set-up session** – place targets on designated boards, set up chairs and boards, and prepare equipment
- **Carry out the various volunteer duties**
  - being encouraging; positive reinforcement
  - creating a safe and inclusive environment
- **Break down session** – targets/boards, collect & store bows/arrows, place chairs inside

VOLUNTEER TRAINING

VOLUNTEER GUIDE

OUR PARTNERS: Chesterfield County Parks & Recreation

– ARCHERY

HOW THE SPORT WORKS –

- Athletes will arrive and then get set up for a bow that helps them be the most successful
- They choose a spot or are placed in a designated area(s) to shoot arrows
  - close shooting area vs distance shooting area
- Athletes are set up with ~8 arrows and may start shooting in standing, seated in chair, or in personal chair
  - following Safety Whistle Protocol

VIDEOS ABOUT ADAPTIVE ARCHERY

DIAGNOSES YOU MAY SEE & POSSIBLE PRESENTATIONS

SPINAL CORD INJURIES (SCI)

"TERMS TO KNOW"

Complete Spinal Cord Injury: total loss of sensation and bodily movement
Incomplete Spinal cord Injury: communication between brain and below injury exists; athlete might have partial sensation and bodily movement

Tetraplegia – paralysis of 4 limbs and trunk (typically from injury at the neck)
Paraplegia – paralysis of lower half of body (legs and potentially trunk)

Injury between C5-C7 → tetraplegia; able to move neck/shoulder; no movement in legs, trunk, wrists, and hands
Injury between T1-T12 → paraplegia; able to move arms/hands; limited trunk and leg movement
- "the higher the injury, the less trunk control athlete may have"

Injury between L1-L5 → paraplegia, good upper body and trunk strength; limited leg movement

POST CVA (STROKE)

Period of interrupted blood flow, causing brain to lose oxygen in that part of brain; depending on where has physical & cognitive impacts

→ Decreased **muscle strength (one-sided)**
→ Decreased **mobility** in standing
→ Difficulty with **balance** & **coordination**
→ **Stiff/tight muscles**
→ Can **fatigue** quickly after high-energy tasks

Fatigue = getting tired, slowness, hard to concentrate, dizziness, shortness of breath

(MULTI)LIMB AMPUTATION

Surgical removal or traumatic loss of all or part of limb(s) such as an arm, leg, finger, or toe

→ Potential decreased **balance**, **coordination**, and **walking** pattern
→ Decreased **range of motion**
→ **Altered center of gravity** & **postural control**
→ Athletes wearing **prosthetics/orthoses**
→ Can be easily **fatigued**

SPINAL MUSCULAR ATROPHY

Progressive muscle weakness due to losing motor neurons in spinal cord

→ Potential decreased **head control** & **mobility**
→ Decreased **muscle strength**

VISUAL IMPAIRMENTS

Functional limitations of the eyes; partial or total loss of sight, sharpness, and visual field

→ Decreased **visibility** for objects at far distances
→ Increased response to sound and contrast
** benefitting from laser pointers, audible balls, guided running tethers, tandem bikes

MULTIPLE SCLEROSIS

Autoimmune condition attacking the protective covering around nerves of the brain and spinal cord

→ Quick to **fatigue** after high energy tasks
→ Decreased muscle strength and sensation
→ Increased muscle spasms
→ Decreased balance (in standing)

TRAUMATIC BRAIN INJURY

Disruption of brain function caused by external force or penetrating injury

→ May have difficulty concentrating & headaches
→ Can be easily **fatigued**
→ Potential difficulty with communication

CEREBRAL PALSY

Abnormal development or damage occurs within early developing brain

→ **Stiff muscles** potentially impacting arms, legs and trunk movement to shoot arrows
→ Decreased **controlled body movements**
→ Unintentional movements impacting **balance**, **coordination**, and **walking** pattern

– WHEELCHAIR RUGBY

POTENTIAL VOLUNTEER ROLES –

You may be seeing and/or doing:

- **Assist with transfers to and from rugby chairs**
  - **what to look for: making sure athlete is comfortable or if they would like assistance with something; ask first !**
- **Collecting rugby balls**
  - **during drills and games, keeping game flow**

DIAGNOSES TO EXPECT –

Our athletes that participate in wheelchair rugby present with various physical disabilities impairing movement of 3-4 limbs including, but not limited to:

- **Spinal Cord Injuries**
- **Muscular Dystrophy**
- **Multi-limb Amputees**
- **Cerebral Palsy**

ADDITIONAL EDUCATION ON DIAGNOSES

EQUIPMENT –

Sportable will provide all equipment necessary including:

Regulation rugby balls
Hand protection
Rugby wheelchair that fit the athlete securely with lap/feet straps

Offensive Chair

There are two types:

1. **Offensive chairs** = with front bumpers and wings
2. **Defensive chairs** = with bumpers set up to hook and hold onto other players

Defensive Chair

MORE EQUIPMENT INFORMATION

CHAIR FITTING & ADAPTATIONS –

Straps can be used along athletes' chest for added support to maintain their position in the chair

Palm and high wrist gloves provide added stability, comfort, and protection

Seat angle (dump) in the wheelchair can be adjusted to improve stability for individuals with decreased trunk control

Ball holders can be attached to chairs to support the ball while in play

SCHEDULE & VOLUNTEERING –

Meet at the designated location for that session 30 minutes prior to start of wheelchair rugby session (check email to confirm time)

- **Set-up session** (equipment, balls, wheelchairs)
- **Carry out the various volunteer duties**
  - Being encouraging; positive reinforcement
  - Creating safe and inclusive environment
- **Breaking down session** – Collect and store balls and wheelchairs

VOLUNTEER TRAINING

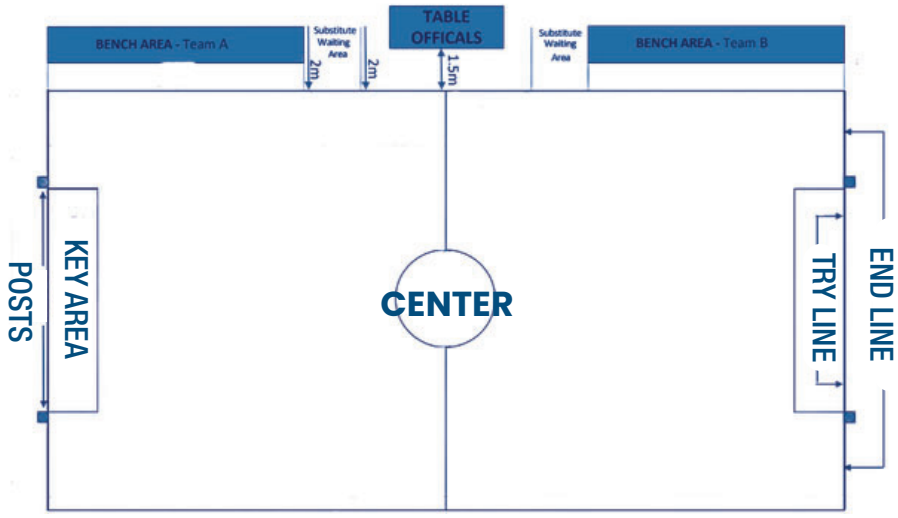
VOLUNTEER GUIDE

– WHEELCHAIR RUGBY

HOW THE SPORT WORKS –

- Wheelchair rugby is played on an indoor court with 4 players from each team
  - Begins with a tip-off in the center circle
  - Consists of 4 periods of 8 minutes
- Goal is to score 'tries" by crossing the opposing team's **try line** while in possession of the ball - in athletes' lap, hand, or dribbling
- **Ten second violation =**
  - Players **must** dribble the ball every **10** seconds
- **Forty second violation =**
  - Each team has **40 seconds** to cross the other team's try line

RUGBY COURT



The USA Wheelchair Rugby Association classifies competitive players based on their functional ability from 0.5 to 3.5 points.

VIDEO EXPLAINING WHEELCHAIR RUGBY & DIFFERENT PLAYER ROLES

DIAGNOSES YOU MAY SEE & POSSIBLE PRESENTATIONS

CEREBRAL PALSY

Abnormal development or damage occurs within early developing brain

→ **Stiff muscles** potentially impacting arms, legs and trunk
→ Decreased **controlled body movements**
→ Unintentional movements impacting **balance**, **coordination**, and **walking** pattern

SPINAL CORD INJURIES (SCI)

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(MULTI)LIMB AMPUTATION

Surgical removal or traumatic loss of all or part of limb(s) such as an arm, leg, finger, or toe

→ Potential decreased **balance**, **coordination**, and **walking** pattern
→ Decreased **range of motion**
→ Altered **center of gravity & postural control**
→ Athletes wearing **prosthetics/orthoses**
→ Can **fatigue** quickly after high-energy tasks

MUSCULAR DYSTROPHY

Progressive muscle weakness, losing muscle mass over time

→ Decreased **range of motion**
→ Decreased **balance** and **coordination**
→ **Muscle weakness** limiting **mobility**
→ Potential increased **muscle stiffness** in joints
→ Quick to **fatigue** during high-energy tasks

Fatigue = getting tired, slowness, hard to concentrate, dizziness, shortness of breath

– PICKLEBALL

POTENTIAL VOLUNTEER ROLES –

Potential volunteer roles you may be seeing/doing:

- **Unloading and setting up sportschairs**
- **Setting up pickleball nets and equipment**
- **Assist with transfers into various sportschairs:**
  - **what to look for: making sure athlete is comfortable or if they would want help with something; ask first !**
- **Assist if any other equipment is needed for gripping paddle**
  - **what to look for: safety, mobility**
- **Have good back & forth volleys with athletes**
  - **what to look for: comfortability, safety**
- **Pick up/run for balls**
- **Breakdown sportschairs, storing them into van**

VOLUNTEER TRAINING

VOLUNTEER GUIDE

DIAGNOSES TO EXPECT –

Athletes who likely participate in adaptive pickleball might have a wide range of diagnoses including, but not limited to:

- **Amputation**
- **Multiple Sclerosis**
- **Spinal Cord Injury**
- **Cerebral Palsy**
- **Spina Bifida**
- **Post CVA (Stroke)**
- **Spinal Muscular Atrophy**
- **Osteogenesis Imperfecta**

ADDITIONAL EDUCATION ON DIAGNOSES

EQUIPMENT –

Sportable will provide:

- Paddle and pickleballs
- Sportschairs that fits athletes securely - **waist straps** and **foot straps** can be used for a more snug fit

COMMON ADAPTATIONS –

Pickleball retrievers and/or **special tape** can be attached to the paddle to pick up the ball independently

To hold the paddle, self-adherent, **latex free wrapping** can be used around hand/arm for individuals with decreased grip strength

Eazy Hold universal cuffs can support a players' ability to maintain grasp on the paddle

SCHEDULE & VOLUNTEERING –

Meet at the designated location for that season; 30 minutes prior to start of pickleball session (check email to confirm time)

- **Set-up session** (equipment, nets, and sportschairs
- **Carry out volunteer duties**
  - Positive reinforcement; being encouraging
  - Creating safe and inclusive environment
- **Breaking down session** – Collect and store sportschairs into van

Volunteer Pickleball Guidelines

OUR PARTNERS:

– PICKLEBALL

HOW THE SPORT WORKS –

- Can be played using a wheelchair or without a wheelchair (para-standing)
- Depending on player mobility, the ball may bounce **once** or **twice** before returning the ball
- First team to **11 points** wins!

- All volleys must be initiated outside of the non-volley zone (the kitchen)
- Players must serve outside of the baseline before moving forward
- Serving team wins points!

VIDEO ABOUT ADAPTIVE PICKLEBALL & RULES

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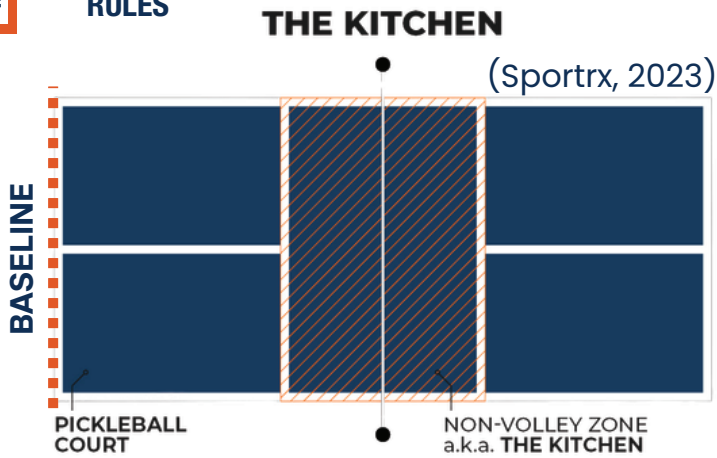

DIAGNOSES YOU MAY SEE & POSSIBLE PRESENTATIONS

MULTIPLE SCLEROSIS

Autoimmune condition attacking the protective covering around nerves of the brain and spinal cord

→ Quick to **fatigue**
→ Decreased **muscle strength and sensation**
→ Decreased **balance**
→ Increased **muscle spasms**

SPINA BIFIDA

When the spine & spinal cord don't form properly during birth; most commonly there's a separation in one or more spinal vertebrae

→ Decreased **mobility** and **sensation in legs** to hit the ball
→ Can **fatigue** quickly after high-energy tasks
→ Decreased **muscle strength**

SPINAL MUSCULAR ATROPHY

Progressive muscle weakness due to losing motor neurons in spinal cord

→ Potential decreased **head control & mobility**
→ Decreased **muscle strength & grip strength**

POST CVA (STROKE)

Period of interrupted blood flow, causing brain to lose oxygen in that part of brain; depending on where has physical & cognitive impacts

→ Decreased **muscle strength (one-sided)**
→ Decreased **mobility** in standing
→ Difficulty with **balance/coordination**
→ **Stiff/tight muscles**
→ Can **fatigue** quickly

CEREBRAL PALSY

Abnormal development or damage occurs within early developing brain

→ **Stiff muscles** potentially impacting arms, legs and trunk hitting the ball or holding paddle
→ Decreased **controlled body movements**
→ Unintentional movements impacting **balance**, **coordination**, & **walking**

(MULTI)LIMB AMPUTATION

Surgical removal or traumatic loss of all or part of limb(s) such as an arm, leg, finger, or toe

→ Potential decreased **balance**, **coordination**, and **walking** pattern
→ Decreased **range of motion**
→ Altered **center of gravity & postural control**
→ Athletes wearing **prosthetics/orthoses**
→ Can **fatigue** quickly

SPINAL CORD INJURIES (SCI)

"TERMS TO KNOW"

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OSTEOGENSIS IMPERFECTA

Genetic disorder causing fragile bones due to decreased collagen production

→ Decreased **mobility** and **muscle strength**
→ Easily **bruised**
** benefit from seated sports and swimming

– ROWING & ERGING

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POTENTIAL VOLUNTEER ROLES –

Volunteer roles you may be seeing and/or doing:

- **Setting up equipment; assessing athlete folders?**
- **Assist with transfers to & from various wheelchairs into different rowing equipment:**
  - **what to look for: core stability, upper body strength, hand grasp function**
  - **if they would want help with something; ask first !**

VOLUNTEER TRAINING

VOLUNTEER GUIDE

ADDITIONAL EDUCATION ON DIAGNOSES

DIAGNOSES TO EXPECT –

Our athletes participate in rowing & erging with a wide range of diagnoses including, but not limited to:

- **Amputation**
- **Multiple Sclerosis**
- **Spinal Cord Injury**
- **Cerebral Palsy**
- **Spina Bifida**
- **Post CVA (Stroke)**
- **Spinal Muscular Atrophy**
- **Visual Impairment**

EQUIPMENT –

Erging machines - typically used indoors but moved outdoors for warm weather!
Rowing boats (sculls) & oars

- Both rowing & erging have straps available for athletes' feet, knees, chest, and lap if they need a more secure fit

ASK ABOUT ANYTHING! FROM WATER SAFETY TO HOW & WHERE TO HELP!

COMMON ADAPTATIONS –

Active Hands gripping aids can be utilized to keep athletes' hands in a fist to grasp the handle for those with reduced hand function

Wintech Fixed Seats can provide postural support for individuals with decreased sitting balance, and can be used with or without straps

- **Wheelchair cushions** can be placed on top as well for added comfort and skin protection

Pontoons can be added to both sides of rowing boats to increase stability and security on the water

SCHEDULE & VOLUNTEERING –

Meet at designated location for that season; 30 minutes prior to start of rowing/erging session (check email to confirm time)

- **Set-up session** (equipment, sculls/rowing boats, & oars)
- **Carry out volunteer duties**
  - Being encouraging; positive reinforcement
  - Creating safe and inclusive environment on/off of the water
- **Breaking down session** – Collect, clean, and breakdown rowing/erging equipment

OUR PARTNERS: RCR VIRGINIA BOAT CLUB RICHMOND

– ROWING & ERGING

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HOW THE SPORT WORKS –

ROWING TECHNIQUE TO KNOW! This can be broken down into 4 simple steps for proper form, and adapted to athletes' needs:

VIDEO ABOUT ROWING & COMMON EQUIPMENT

CATCH

Body forward with arms extended, back straight, and knees bent

DRIVE

Push with legs if able, keep back straight, then pull the handle to the chest

FINISH

Legs extended, back slightly leaning back, arms pulling handle to chest

RECOVERY

Extend arms, lean forward from the hips, and bend at the knees to return to the catch

DIAGNOSES YOU MAY SEE & POSSIBLE PRESENTATIONS

MULTIPLE SCLEROSIS

Autoimmune condition attacking the protective covering around nerves of the brain and spinal cord

→ Quick to **fatigue**
→ Decreased **muscle strength and sensation**
→ Decreased **balance**
→ Increased **muscle spasms**

SPINA BIFIDA

When the spine & spinal cord don't form properly during birth; most commonly there's a separation in one or more spinal vertebrae

→ Decreased **mobility and sensation** in legs
→ Can **fatigue** quickly after high-energy tasks
→ Decreased **muscle strength**

SPINAL MUSCULAR ATROPHY

Progressive muscle weakness due to losing motor neurons in spinal cord

→ Potential decreased **head control & mobility**
→ Decreased **muscle strength**

POST CVA (STROKE)

Period of interrupted blood flow, causing brain to lose oxygen in that part of brain; depending on where has physical & cognitive impacts

→ Decreased **muscle strength (one-sided)**
→ Decreased **mobility** in standing
→ Difficulty with **balance/coordination**
→ Stiff/tight muscles
→ Can **fatigue** quickly

CEREBRAL PALSY

Abnormal development or damage occurs within early developing brain

→ **Stiff muscles** potentially impacting arms, legs and trunk
→ Decreased **controlled body movements**
→ Unintentional movements impacting **balance**, **coordination**, and **walking** pattern

(MULTI)LIMB AMPUTATION

Surgical removal or traumatic loss of all or part of limb(s) such as an arm, leg, finger, or toe

→ Potential decreased **balance**, **coordination**, and **walking** pattern
→ Decreased **range of motion**
→ Altered **center of gravity** & **postural control**
→ Athletes wearing **prosthetics/orthoses**
→ Can **fatigue** quickly

SPINAL CORD INJURIES (SCI)

"TERMS TO KNOW"

Complete Spinal Cord Injury: total loss of sensation and bodily movement
Incomplete Spinal cord Injury: communication between brain and below injury exists; athlete might have partial sensation and bodily movement

Tetraplegia – paralysis of 4 limbs and trunk (typically from injury at the neck)
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Injury between C5-C7 → tetraplegia; able to move neck/shoulder; no movement in legs, trunk, wrists, and hands
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- "the higher the injury, the less trunk control athlete may have"

Injury between L1-L5 → paraplegia, good upper body and trunk strength; limited leg movement

VISUAL IMPAIRMENTS

Functional limitations of the eyes; partial or total loss of sight, sharpness, and visual field

→ Decreased visibility for objects at far distances
→ Increased response to sound and contrast
** benefitting from laser pointers, audible balls, guided running tethers, tandem bikes

– ROCK CLIMBING

POTENTIAL VOLUNTEER ROLES –

Volunteer roles you may be seeing and/or doing:

- Assist with transfers to & from various wheelchairs into different harnesses:
  - what to look for: core stability, upper body strength, hand grasp function
  - if they would want help with something; ask first !
- If a certified Belayed volunteer, you can fit athletes into harness
  - When belaying:
    - scanning area and climbing path
    - assisting next move (if needed)
    - lower athletes safely to the ground
- Athletes can choose where they climb when safe
  - Routes range in skill from beginner to advanced so there is something for all athletes!

DIAGNOSES TO EXPECT –

Athletes who are likely to participate in adaptive climbing have a wide range of diagnoses including, but not limited to:

- Amputation
- Multiple Sclerosis
- Spinal Cord Injury
- Cerebral Palsy
- Visual Impairments
- Post CVA (Stroke)
- Traumatic Brain Injury

ADDITIONAL EDUCATION ON DIAGNOSES

EQUIPMENT –

Sportable alongside partners at **Beyond Boundaries & Peak Experiences** will provide all equipment necessary to get athletes climbing right away, including:

- A Climbing Harness fit to athlete's body
- Helmet (if desired)
- Climbing shoes

- Athletes may be wearing their own athletic shoes that are snug fitting and close toed!

COMMON ADAPTATIONS –

A variety of adaptive harnesses can be utilized to meet the athletes' needs:

- **Easy Seat Harness:** allows athlete to sit on a padded seat with leg loops, waist straps, and chest straps for added support
- **Full Body Harness (most common):** goes around athlete's shoulders, chest, waist, and legs for additional support
- **Arc Harness:** offers the most support with a padded seat, neck support, leg loops, waist straps, and chest straps

Laser Pointers can be utilized for individuals with visual impairments to highlight rocks available to step on or grab while climbing

SCHEDULE & VOLUNTEERING –

Meet at the designated location for that season; 30 minutes prior to start of rock climbing session (check email to confirm time)

- **Set up session** (prepare harnesses, clear the area)
- **Carry out volunteer duties**
  - Giving positive reinforcement; being encouraging
  - Creating safe and inclusive environment
- **Breakdown session** (help transfer athletes, collect harnesses, & put away any other equipment)

VOLUNTEER TRAINING

VOLUNTEER GUIDE

OUR PARTNERS:

– ROCK CLIMBING

HOW THE SPORT WORKS –

- Athletes get fitted for a harness that prepares them to be the most successful and thrive on the rock wall
- Depending on the athlete, the option to use visual laser pointer or extra assistance can be used to best support athlete
- Once climbers are on their harness and strapped in, they are ready to go until the session is over!

HOW TO BELAY IN ADAPTIVE ROCK CLIMBING

VIDEO ABOUT ADAPTIVE ROCK CLIMBING

DIAGNOSES YOU MAY SEE & POSSIBLE PRESENTATIONS

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TRAUMATIC BRAIN INJURY

Disruption of brain function caused by external force/penetrating injury

→ May have difficulty **concentrating**
→ Headaches
→ Can be easily **fatigued**
→ Potential difficulty with **communication**

MULTIPLE SCLEROSIS

Autoimmune condition attacking the protective covering around nerves of the brain and spinal cord

→ Quick to **fatigue**
→ Decreased **muscle strength and sensation**
→ Decreased **balance**
→ Increased **muscle spasms**

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Fatigue = getting tired, slowness, hard to concentrate, dizziness, shortness of breath

– WHEELCHAIR BASKETBALL

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POTENTIAL VOLUNTEER ROLES –

Volunteer roles you may be seeing and/or doing:

- **Setting up basketball hoops, wheelchairs, & equipment**
- **Assist with transfers to & from various wheelchairs**
  - **what to look for: core stability, safety, comfortability**
  - **if they would want help with something; ask first !**
- **Collecting basketballs and passing/giving it to athlete**
- **Assist coaches with drills and other tasks**

VOLUNTEER TRAINING

VOLUNTEER GUIDE

ADDITIONAL EDUCATION ON DIAGNOSES

DIAGNOSES TO EXPECT –

Athletes participating in basketball present with a wide range of diagnoses resulting in permanent lower limb impairments including, but not limited to:

- **Spina Bifida**
- **Arthrogryposis**
- **Club Foot**
- **Cerebral Palsy**
- **Spinal Muscular Atrophy**
- **Spinal Cord Injury**
- **Lower Limb Amputation**
- **Osteogenesis Imperfecta**

EQUIPMENT –

- **Basketball wheelchair** that fits the athlete securely with straps along athlete's waist, thighs, calves, and feet
- **Regulation NWBA basketballs**
  - 3 different sizes for youth, D3, and women's

MORE EQUIPMENT INFORMATION

COMMON ADAPTATIONS –

The **seat angle (dump)** in the wheelchair can be adjusted to improve stability for individuals with decreased trunk control

Straps can be utilized along athletes' chests for added support to maintain stable position in the sports chair

Prep players can play with the **Easy Up Youth Mini Goal**, a basketball hoop with adjustable height to put the rim within reach!

- youth hoop height = 8.5 ft; attaches to regular hoop

SCHEDULE & VOLUNTEERING –

Meet at the designated location for that season; 30 minutes prior to start of basketball session (check email to confirm time)

- **Set-up session** (equipment, hoops, & wheelchairs)
- **Carry out volunteer duties**
  - Being encouraging; positive reinforcement
  - Creating safe and inclusive environment
  - Socialize with athletes
- **Breaking down session** – Collect all the basketballs and chairs, then load them into van

Not all players use wheelchairs for everyday mobility!

Volunteer Training for Wheelchair Basketball tournaments

OUR PARTNERS:

– WHEELCHAIR BASKETBALL

HOW THE SPORT WORKS –

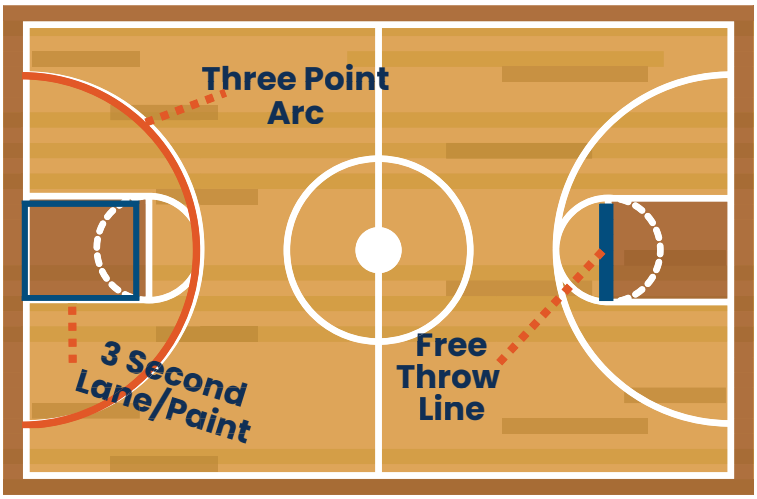
Played with 2 teams of 5 players on a standard basketball court

- A game consists of **4 10-minute quarters** for adults & junior varsity, and **4 8-minute quarters** for prep
- The sports chair is considered part of the player's body

The **goal =** score more points than the opposing team

- **Free throw** = 1 point
- **Inside the 3-point arc** = 2 points
- **Outside the 3-point line** = 3 points

BASKETBALL COURT



Video of wheelchair basketball & Rules

Traveling violation

- After every two pushes, the player **MUST** either dribble, pass, or shoot to avoid a traveling violation
- There is **NO** double dribble rule!

Three second lane violation

- Offensive players may not remain in the opponent's 3 second lane/paint for **more than 3** seconds

DIAGNOSES YOU MAY SEE & POSSIBLE PRESENTATIONS

SPINA BIFIDA

When the spine & spinal cord don't form properly during birth; most commonly there's a separation in one or more spinal vertebrae

→ Decreased **mobility and sensation in legs**
→ Can **fatigue** quickly after high-energy tasks
→ Decreased **muscle strength**

Fatigue = getting tired, slowness, hard to concentrate, dizziness, shortness of breath

SPINAL CORD INJURIES (SCI)

Complete Spinal Cord Injury: total loss of sensation and bodily movement
Incomplete Spinal cord Injury: communication between brain and below injury exists; athlete might have partial sensation and bodily movement

Tetraplegia – paralysis of 4 limbs and trunk (typically from injury at the neck)
Paraplegia – paralysis of lower half of body (legs and potentially trunk)

Injury between C5-C7 → tetraplegia; able to move neck/shoulder; no movement in legs, trunk, wrists, and hands
Injury between T1-T12 → paraplegia; able to move arms/hands; limited trunk and leg movement

- "the higher the injury, the less trunk control athlete may have"

Injury between L1-L5 → paraplegia, good upper body and trunk strength; limited leg movement

(MULTI)LIMB AMPUTATION

Surgical removal or traumatic loss of all or part of limb(s) such as an arm, leg, finger, or toe

→ Potential decreased **balance, coordination**, and **walking** pattern
→ Decreased **range of motion**
→ Altered **center of gravity** & **postural control**
→ Athletes wearing **prosthetics/orthoses**
→ Aan **fatigue** quickly

CEREBRAL PALSY

Abnormal development or damage occurs within early developing brain

→ **Stiff muscles** potentially impacting arms, legs and trunk
→ Decreased controlled body movements
→ Unintentional movements impacting **balance, coordination**, & **walking** pattern

– CYCLING

sportable

POTENTIAL VOLUNTEER ROLES –

Volunteer roles you may be seeing and/or doing:

- **Unloading and setting up bikes**
- **Assist with transfers into various bikes/trikes:**
  - **what to look for: making sure athlete is comfortable or if they would like help... just ask!**
- **Assist if there is any additional equipment needed for gripping handles**
  - **what to look for: safety**
- **Ride alongside athletes or if comfortable, ride tandem with athletes**
  - **what to look for: comfortability, safety**
  - **assist if athlete wants to adjust gears or position**
- **Breakdown bikes, storing them into van**

VOLUNTEER TRAINING

VOLUNTEER GUIDE

DIAGNOSES TO EXPECT –

Athletes who are likely to participate in adaptive cycling present with a wide range of diagnoses including, but not limited to:

- **Amputation**
- **Multiple Sclerosis**
- **Spinal Cord Injury**
- **Cerebral Palsy**
- **Visual Impairments**
- **Post CVA (Stroke)**
- **Spinal Muscular Atrophy**
- **Osteogenesis Imperfecta**

ADDITIONAL EDUCATION ON DIAGNOSES

EQUIPMENT –

Hand Cycles - this bike is propelled by athlete's arms through a crank system

Recumbent Foot Pedaled Trikes - this bike has the user in a reclined position for increased support, with foot pedals and hand controls

Tandem Bikes - this style of bike allows for 2 riders at once

Traditional Bikes & Helmets

COMMON ADAPTATIONS –

Foot fixation trays, straps, and toe clips can be utilized to hold the rider's feet in place while cycling

Active Hands gripping aids can be used to keep athlete's hand in a fist to grasp the handles for individuals with reduced hand function

Quad Grips can be used to increase athlete's grip on handcycles for individuals with decreased grip strength

Brakes can be mounted on on same side as the gear shifter for easy, one handed operation

SCHEDULE & VOLUNTEERING –

Meet at the designated location for that season; 30 minutes prior to start of cycling session (check email to confirm time)

- **Set-up session** – equipment & bikes/trikes
- **Carry out volunteer duties**
  - positive reinforcement; being encouraging
  - creating safe and inclusive environment
- **Breaking down session** – Collect and store bikes

Advanced Cycling & What you will see!

Experienced riders looking to improve endurance, speed, and techniques; preparation & structured training for competitive events at regional/national levels

Recreational Cycling & What you will see!

Riders who are new to adaptive cycling, focusing on skill development, bike fitting, safety, and confidence-building in a supportive environment; learning basic handling, braking, and riding techniques with the guidance of experienced coaches and volunteers

OUR PARTNERS: Houston Recreation & Parks · ZWIFT

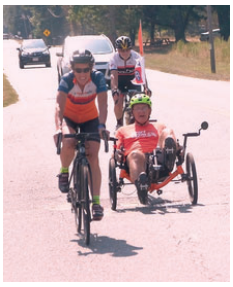
– CYCLING

HOW THE SPORT WORKS –

- Riders get fitted for a bike that prepares them to be the most successful and thrive OR some riders have their own bikes
- Depending on the athlete, the option to tandem ride is an option for a volunteer
- Some riders are preparing for competitions and some are new to adaptive cycling
- Once riders are on their bikes, they are ready to go until the session is over!

DIFFERENT BIKES/TRIKES & WHEN THEY ARE MOST OFTEN USED

MORE EQUIPMENT INFORMATION



DIAGNOSES YOU MAY SEE & POSSIBLE PRESENTATIONS

SPINAL CORD INJURIES (SCI)

"TERMS TO KNOW"

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Fatigue = getting tired, slow, hard to concentrate or move, dizziness, shortness of breath

OSTEOGENSIS IMPERFECTA

genetic disorder causing fragile bones due to decreased collagen production

→ Decreased **mobility** & **muscle strength**
→ Easily bruised
** benefit from seated sports

MULTIPLE SCLEROSIS

Autoimmune condition attacking the protective covering around nerves of the brain and spinal cord

→ Quick to **fatigue**
→ Decreased **muscle strength and sensation**
→ Decreased **balance**
→ Increased muscle spasms

(MULTI)LIMB AMPUTATION

Surgical removal or traumatic loss of all or part of limb(s) such as an arm, leg, finger, or toe

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→ Decreased **range of motion**
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→ Athletes wearing prosthetics/orthoses
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POST CVA (STROKE)

Period of interrupted blood flow, causing brain to lose oxygen in that part of brain; depending on where has physical & cognitive impacts

→ Decreased **muscle strength (one-sided)**
→ Decreased **mobility** in standing
→ Difficulty with **balance/coordination**
→ Stiff/tight muscles
→ Can **fatigue** quickly

VISUAL IMPAIRMENTS

Functional limitations of the eyes; partial or total loss of sight, sharpness, and visual field

→ Decreased visibility for objects at far distances
→ Increased response to sound and contrast
** benefits from laser pointers, audible balls, guided running tethers, tandem bikes

SPINAL MUSCULAR ATROPHY

Progressive muscle weakness due to losing motor neurons in spinal cord

→ Potential decreased **head control & mobility**
→ Decreased **muscle strength**