

SOLUTION

SKIING UNLIMITED TRAINING GUIDE

Courtyard Medical Plaza

SAMPLE

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Skiing Unlimited Training Guide

INTRODUCTION

Courtyard Medical Plaza works closely with the Society for Handicapped Children and Adults of Sacramento County to run the Skiing Unlimited program for individuals with developmental challenges. The Skiing Unlimited programs is solely donor funded and is run by volunteers who give of their time and energy to provide snow skiing opportunities to those who would otherwise not be able to participate in this wonderful sport.

This training guide is designed to help volunteers understand the different types of disabilities and the equipment used for the Skiing Unlimited program.

DEVELOPMENTALLY DISABLED (DD)

Disabilities

Below is a summary of some of the DD participants we will work with throughout the ski season.

- ☒ Brain injury (Organic—physical; Inorganic—psychiatric)
- ☒ Autism
- ☒ Cerebral Palsy (Diplegia—All limbs, but legs more severely; Hemiplegia—Limbs on one side, Quadriplegia—All limbs affected)
- ☒ Fetal Alcohol Syndrome (Usually physical and mental impairment)
- ☒ Fragile X Syndrome
- ☒ Downs Syndrome (Always ask if they are C-1 or C-2 instable)

Physical Evaluation

A physical evaluation should always be performed prior to selecting equipment. Parents are a wonderful source of information during this process.

- ☒ Determine strength, coordination, balance, range of motion, sensory and motor abilities.
- ☒ Cognitive Assessment: determine the developmental age, learning style, motivation, social skills, and communication abilities of the participant.
- ☒ Always ask if prone to seizures. What medications?

Introduction to Equipment

- ☒ Be sure student's boots fit properly with only one pair of socks.
- ☒ Poles may be used, but they may also be inappropriate.
- ☒ Have participant feel equipment to get familiar with it. Be sure to warn student about sharp ski edges and powerful binding springs.
- ☒ Explain the uses of the adaptive equipment that may be used to assist the participant.

Skiing Procedures^A

- ☒ Follow standard ATS progression for skier levels 1 through 9.
- ☒ Establish emergency commands.
- ☒ Establish procedure for student and instructor in case of separation on the hill.
- ☒ Be aware of cognitive and behavioral challenges the student may have. Be in a position to intervene should the student stray from the task at hand physically and/or mentally.

^A Skiing procedures vary depending on the clients' needs.

VISUAL IMPAIRED (VI)

Disabilities

Below is a list of common conditions for those who are visually impaired and a brief explanation of each.

- ☑ Albinism—Oversensitive to light possible poor vision due to imperfect retina
- ☑ Cataracts—Cloudiness similar to looking through a dirty windshield (Worse in sunlight)
- ☑ Color Blindness—Poor color vision
- ☑ Congenital Visual Impairment or Eye trauma—Any degree of visual impairment
- ☑ Diabetic Retinopathy—Patchy vision may change from day to day, Bring Candy
- ☑ Glaucoma -Tunnel vision, Lack of peripheral vision
- ☑ Head injury or cardiovascular accident—Any visual impairment, check for seizures
- ☑ Macular Degeneration—Poor visual acuity lack of detail good peripheral vision
- ☑ Monocular vision—Poor depth perception but generally good acuity
- ☑ Multiple Sclerosis—Blurred or Double vision
- ☑ Nystagmus—Inability to focus causes rapid eye movement
- ☑ Retinitis Pigmentosa—Night Blindness

Physical Evaluation

A physical evaluation should always be performed prior to selecting equipment. Parents are a wonderful source of information during this process.

- ☑ Determine strength, coordination, balance, range of motion, sensory and motor abilities.
- ☑ Cognitive Assessment: determine the developmental age, learning style, motivation, social skills, and communication abilities of the participant.
- ☑ Test Vision thoroughly including: visual acuity, range of vision, depth of vision, outdoor vision vs. indoor vision, peripheral vision, and light and color sensitivity.
- ☑ Always ask if prone to seizures. What medications?

Introduction to Equipment

- ☑ Be sure student's boots fit snugly with only one pair of socks.
- ☑ Be sure to get poles if student is able to use them. They can be used like a cane for feeling nearby objects and to provide sensory input while skiing.
- ☑ Have student feel equipment to get familiar with it. Be sure to warn student about sharp ski edges and powerful binding springs
- ☑ Blind Skier and Guide Bibs, Ski tip connector, Reins, Bamboo poles or ski pole, Climbing harness, and Cants and lifts.

Skiing Procedures

- ☑ Follow standard ATS progression for skier levels 1 through 9.
- ☑ Find out from the student which guiding technique they prefer. It is easier for the able-bodied instructor to adjust to the students preferred method than it is for the student to adjust to the instructors preferred method.
- ☑ Establish emergency commands.
- ☑ Establish procedure for student and instructor in case of separation on the hill.

Guiding Techniques^B

- ☑ Guiding from in front, rear, and side
- ☑ Horse and buggy from the front and the rear
- ☑ Bamboo pole

^B A minimum of two guides is required for all clients.

FOUR-TRACK (4T) AND THREE-TRACK (3T)

Four-track skiers are those skiers who have use of both of their arms and legs. Typically, 4T skiers use two skis and two outriggers. Three-track skiers are those skiers with one leg and use of both their arms. These 3T skiers use one ski and two outriggers.

Common Disabilities

- ☑ Post-Polio
- ☑ Guillain Barré syndrome (impaired movement and sensation)
- ☑ Cerebral Palsy
- ☑ Brain injury (organic and inorganic)
- ☑ Multiple Sclerosis
- ☑ Muscular Dystrophy
- ☑ SCI
- ☑ Spina Bifida

Physical Evaluation

A physical evaluation should always be performed prior to selecting equipment. Parents are a wonderful source of information during this process.

- ☑ Determine strength, coordination, balance, range of motion, sensory and motor abilities.
- ☑ Cognitive Assessment: determine the developmental age, learning style, motivation, social skills, and communication abilities of the participant.
- ☑ Test Vision thoroughly including: visual acuity, range of vision, depth of vision, outdoor vision vs. indoor vision, peripheral vision, and light and color sensitivity.
- ☑ Always ask if prone to seizures. What medications?

Introduction to Equipment

- ☑ Check proper fit of boots
- ☑ Check for proper athletic stance, heel lifts may be necessary for forward pressure
- ☑ Rigger sizing and usage (Ski position and crutch position)

Chairlift Procedures

- ☑ Outriggers must be in ski position

Skiing Procedures

Gliding Wedge

- ☑ Look for good athletic position, head up, and good rigger position with snow contact
- ☑ Use a run-out, or assist skier to a stop

Braking Wedge

- ☑ Teach rigger braking, brake and release, wedge braking

Gliding Wedge Turns

- ☑ Focus on subtle angulation movement to create edging
- ☑ Look in direction of turn
- ☑ Turn to a stop in both directions

Linked Wedge Turns

- ☑ Continue looking in direction of turn, and if necessary, with corresponding outrigger movement
- ☑ Complete turns with rigger braking to control speed.
- ☑ Introduce the theory of turn shape to control speed
- ☑ Slightly countered upper body, if possible

Beginning Wedge Christie Turns

- ☑ Introduce first aspect of "opening the door"
- ☑ Rotary forces to be generated from lowest functioning level
- ☑ Round and complete turns
- ☑ Introduce upper/lower body separation

Advance Wedge Christie

- ☑ Introduce second aspect of opening the door
- ☑ Rhythm and flow
- ☑ Work on active crossover by committing to new turn
- ☑ Increase countering
- ☑ Increase edging through angulation, if possible
- ☑ Side slip, traverse, garlands, traversing side slips

Parallel Turns

- ☑ Introduce third aspect of opening the door
- ☑ Counter down the fall line
- ☑ Identify where to open the door for the type of turn radius desired
- ☑ Introduce uphill outrigger push-off to achieve more active crossover

Dynamic Parallel

- ☑ Short swing v. short radius, bumps
- ☑ Carved turns
- ☑ Racecourse

BI-SKI AND MONO-SKI

The bi-ski and mono-ski are used for those skiers who do not have enough leg strength to stand on their own without assistance. Bi-skis are used for those less experienced or those with limited arm strength. Mono-skis are used for skiers with more experience and have enough strength in their arm to provide balance. Both of these types of skis are commonly referred to as "sit skis."

Common Disabilities

- ☑ Amputees: Double BK, AK
- ☑ Cerebral Palsy: Flaccid, Hypertonic, Hypotonic; cognitive impairments; seizures, paresis
- ☑ Multiple Sclerosis: Exacerbations, visual impairments
- ☑ Muscular Dystrophy: Weakness, weak joints
- ☑ Post-Polio: Different types of braces, weakness in arms, upper torso
- ☑ SCI (Usually T -5 and higher): Autonomic Dysreflexia, meds, spinal stabilizers, temperature regulation, and spasms
- ☑ Spina Bifida: Same as SCI, plus shunts, possible latex allergy

Physical evaluation

A physical evaluation should always be performed prior to selecting equipment. Parents are a wonderful source of information during this process.

- ☑ Determine strength, coordination, balance, range of motion, sensory and motor abilities.
- ☑ Cognitive Assessment: determine the developmental age, determine the learning style; motivation; social skills; and communication abilities of the student.
- ☑ Always ask if prone to seizures. What medications? Anti-convulsant (seizures), Anti-bacterial (UTI's), Antispasmodic.

Introduction to Equipment

- ☑ Safety straps, carabineers /evacuation system (assure integrity of straps, bolts, etc.)
- ☑ Parts of the bi-ski and their function (See Figure 1)

Before Skiing

- ☑ Student must wear a helmet
- ☑ Assure student is properly fit
- ☑ Minimal spaces under legs or behind back
- ☑ Pad where necessary to fill gaps
- ☑ Verify sitting balance by lifting the outriggers
- ☑ Harness, seat, chest and feet straps are snug and secure
- ☑ Hand or fixed outrigger properly sized, adjusted and/or secure
- ☑ Instructor has looped tether (safety strap) and carabineers (2)
- ☑ 2nd instructor for shadowing

Loading Chairlift

- ☑ Release bungee from bucket /ski, if applicable
- ☑ Chairlifts should be traveling at ¼ speed or stopped
- ☑ Shadow instructor and/or chairlift operator should assist in lifting /loading
- ☑ Be aware of student bumping head, shoulder, arms on chairlift pole

Riding Chairlift

- ☑ Assure sit-ski is as far back as possible on chairlift
- ☑ Safety strap should be tight enough to prevent sit-ski from slipping off chairlift
- ☑ Sit still. Do not attempt to make adjustments outside comfortable reach
- ☑ Be aware. Sudden stops, swings, seizures
- ☑ Release safety strap as you prepare to off-load. Keep one hand on sit-ski

Offloading

- ☑ Give a good push to offload chair
- ☑ Easy does it—you're not tethered, and no shadow

Skiing

- ☑ Secure bungee (if applicable)
- ☑ Confirm student and sit-ski are ready—make adjustments
- ☑ Secure looped tethers around wrists, other end attached to sit-ski
- ☑ Shadow instructor should always be in front or beside; never behind
- ☑ If "Ride-only" student, do not take hands off sit-ski
- ☑ If "Learnable" student, slowly release hands & allow tether(s) slack to 10' if conditions allow
- ☑ Control speed and make lots of turns

Skiing Procedures

Gliding Wedge

- ☑ Look for good athletic position, head up, and good rigger position with snow contact
- ☑ Use a run-out, or assist skier to a stop

Braking Wedge

- ☑ Teach rigger braking, brake and release, wedge braking

Gliding Wedge turns

- ☑ Focus on subtle angulation movement to create edging
- ☑ Look in direction of turn
- ☑ Turn to a stop in both directions

Linked Wedge Turns

- ☑ Continue looking in direction of turn
- ☑ Increase amount of angulation
- ☑ Introduce the theory of turn shape to control speed

Beginning Wedge Christie Turns

- ☑ Use turn shape to control speed
- ☑ Round and complete turns
- ☑ Introduce opening the door at finish of turn to control ski and to lead in to next turn

Advance Wedge Christie

- ☑ Rhythm and flow
- ☑ Increase countering
- ☑ Increase edging through angulation
- ☑ Side slip, traverse, garlands, traversing side slips

Parallel Turns

- ☑ Introduce third aspect of opening the door
- ☑ Counter down the fall line with a slight reach
- ☑ Identify where to open the door for the type of turn radius desired
- ☑ Introduce uphill outrigger push-off to achieve more active crossover

Dynamic Parallel

- ☑ Introduce third aspect of opening the door
- ☑ Must have active cross over into fall line
- ☑ Short swing v. short radius, bumps
- ☑ Carved turns
- ☑ Racecourse