



PSIA-Rocky Mountain-AASI ADAPTIVE INFORMATION GUIDE



SKI BIKE

Ski bikes have been around for a long time. US Ski resorts first introduced ski bikes as a fun, new “sliding toy” with many resorts making them available for rent to the general skiing public. They are relatively easy to learn, but may require innovative solutions for lift riding and safe transport uphill. Some areas do not allow ski bikes for the general public because of lift or general slope traffic issues, but will allow them on the mountain as adaptive devices.

It soon became apparent that the Ski Bike is an excellent piece of adaptive equipment allowing people with certain disabilities access to a fun day on the slopes. Because you sit on the bike and can steer the bike with your whole body, arms, feet and legs, it allows people with trouble standing or limited leg strength the chance to enjoy their day on the slopes.

People with these disabilities are prime candidates for Ski Bikes:

Muscular or strength problems.

Multiple Sclerosis

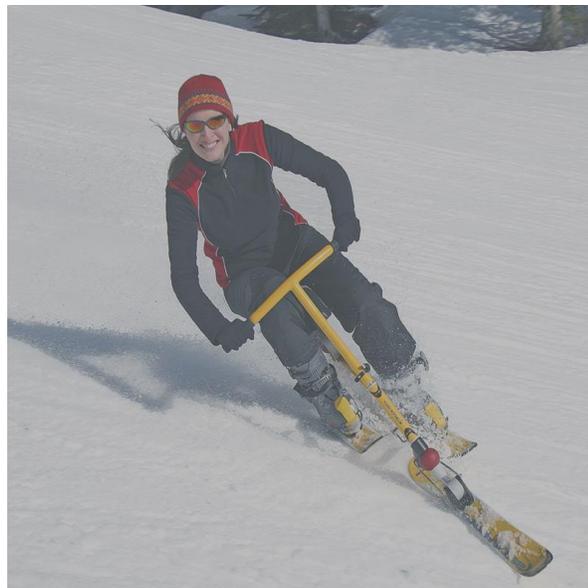
Amputations

Brain Injuries, including Stroke

Balance Problems

Temporary Disabilities (knee injuries or hip replacement)

A ski bike is a great way to fill the gap between stand-up and sit-down skiing.



Ski bikes require a certain amount of balance and leg/arm coordination in order to maneuver safely in a mountain environment. Controlling speed on a ski bike requires the ability to turn the bike across and/or slightly back up hill. Because of this, the Ski Bike may be very easy to learn for someone who has already skied or snowboarded and understands how to make turns for speed control. Ski bikes can be ridden independently or tethered if needed.

Equipment and Set Up:

The Ski Bike is essentially a modified bicycle frame with handlebars and a long seat. The front fork of the bicycle is attached to a small ski that turns in conjunction with the handlebars. The rest of the bicycle frame is attached to a second ski (without turning power) that primarily supports the weight of the skier. Skiers using the Ski Bike can wear specialized “mini skis” on regular ski boots or snowboard boots called foot skis. The skier’s legs help balance and steer the bike as their boots and skis glide along the snow.

Lift Loading Procedures

There are several ways to load a ski bike dependant on the brand of bike and the ski area policy. Since the skiers have mini foot skis attached to their boots, Depending on the manufacturer’s guidelines the ski bike is placed onto the seat next to the rider or held on their lap for the duration of the lift ride. Most ski bikes do not come with straps and carabineers to attach the bike to the lift while riding the chair – this is something that should be added if the ski area policy requires it. Some ski bikes are designed to load with the rider staying seated on the bike. Always familiarize yourself with the ski bike manufacturer’s instructions and the ski area lift policies and procedures before attempting to ride the lift with a ski bike.

Adaptive Ski Bike Progression

Beginner / Novice Zone Objectives

Level 1: Welcome to skiing / Build the foundation

Student assessment & Medical history
Equipment selection, introduction and set up
Equipment orientation and Static balance exercises, indoors
Student/instructor communication, safety and emergency stop

Level 2: Introduction to Flats

Attaching the Foot skis, pushing, turning, pivoting on flats
Static balance exercises, outdoors on flats
Mounting and dismounting the Ski Bike on “mini foot skis”
Falling and getting up (if applicable)
*Straight runs
*Stopping and slowing through turns
Some student’s stamina may limit their ability to work on straight runs and flats for extended periods of time. Plan your lesson accordingly.

Level 3: Introduction to Turning

Turn left & right through balance and turning movements. **At slow speeds only**, the turn of your handle bar will cause your snow bike to turn and thus point across the fall line to decrease speed.

Practice at slow speeds: turning your handlebars and allowing the head and torso to follow into steered turns. Explain that abruptly turning the handle bars at high speeds might cause you to crash, similar to riding on a bike. **With increased speed the turning will happen**

Slightly flexed arms and shoulder similar to a position on a bike.

Vary turn shape and size

Speed control through turn shape

Turning to a stop - Garlands - Fan progression

Linked turns

Master beginner area

Introduction to Chair Lift and easiest Green Terrain

Chair lift loading and unloading procedures

Review lift evacuation procedures

Student assisted/instructor assisted chair lift loading and unloading

Develop greater skill blending

Level 4: Explore the beginner mountain experience

Introduce skidded turns! This is the most important aspect of successfully controlling your speed on a ski bike once you start going up the mountain on steeper and narrower runs.

Start skidding the “tail” of our bike out by flattening the ski and using your hips / torso to initiate the rotation.

Teach counter steering

Develop a short-radius braking turn

Vary turn shape and size for terrain and condition

Explore a variety of snow conditions

Intermediate Zone Objectives

Level 5: Develop and Enhance Intermediate Movement Options

Refine proper body movement and position

Develop short- and medium-radius skidded turns with speed control

Edge control exercises for Ski Bike

Rotary control exercises for Ski Bike

Independent lift loading and unloading

Level 6: Anchor Intermediate Skills and Movements

Practice skidded short- and medium-radius turns with speed control

Ski varying snow conditions

Proper body movements

Hip and whole body angulations

Introduce more carving in turns to facilitate carrying speeds over flats

Level 7: Exploring Movements and Skills for Upper Level Skiing

Bump skiing on easy blue terrain
Short-radius carved turns
Explore carving sensations in greater detail
Total independence
Rebound turns for Ski Bikes

The Advanced Zone Objectives

Level 8: Refining Advanced Movement Patterns

Carving medium- and long-radius turns
Ski short turns on the steeps
Ski blue and easy black bumps
Intro to powder
Braking, gliding control movements on steeper terrain

Level 9: Develop Movement Options for Steep Terrain

Refine movements in short-radius turns
Develop optional movement patterns for varying speed control and conditions
Develop optional movements and skiing tactics for advanced bump skiing
Bumps, racing, off-piste, terrain parks and pipes