
Teaching Three-Track Skiers

What is Three-track Skiing?

In three-track skiing, the skier stands on one ski and uses hand-held outriggers to maintain balance.

Common Disabilities associated with 3-Trackers	Common Medications to Consider
<ul style="list-style-type: none">• Amputation• Amelia• Phocomelia• Paralytic poliomyelitis (polio)	<ul style="list-style-type: none">• Analgesic (pain)• Antibiotics (infection)• Antiemetic (nausea, motion sickness)• Chemotherapy• Radiotherapy

Student Assessment and Equipment Fitting

Some key things to consider when assessing a three-tracker:

- Does the skier normally walk using a prosthesis? If so, this person may tire easily when skiing on one leg and using outriggers.
- If the skier has a stump, make sure it is protected adequately from the elements. Stumps often have poor circulation, so make sure it is kept warm.
- In most cases, the a three-track skier should not ski with a prosthesis. Check with a Lead Volunteer if there is any doubt.
- Find out if the cause of the amputation was organic or traumatic. There may be hidden complications involved that could inhibit the skier's abilities.

Skis

The ski is a normal alpine ski. Use ski shop recommendations for able-body skiers as a guide for similar size adaptive skiers. Some three-trackers find it helpful to use a slightly longer ski.

Boots

Should be snug but not too tight. Objective is to get an athletic stance over a flat ski. You may need to cant with lifts or wedges inside the boot to obtain this. (one-half inch max)

❖ If the skier normally wears leg braces, a larger boot may be needed.

Outriggers

Stand-up crutch outriggers with a flip-up ski. The outriggers should be measured to provide appropriate aid in balancing. Generally the outrigger ski should be 1 inch off the snow when the student is standing on the ski. The grip should be around the skier's hip-level when standing. Adjust the brake — more brake for beginners, less for more advanced skiers.

❖ For beginners, heavier outriggers can provide additional balance.

Three-Track-Specific Teaching Techniques

Teaching three-track skiing follows the basic ATS progressions. What makes three-tracking different is the extra challenge of balancing on one ski.

Because a three-tracker is using only one leg to do all of the work, frequent breaks are important. Help your student in any way you can to avoid unnecessary fatigue.

❖ NOTE: All three-track exercises described in this handbook must be adjusted to accommodate the capabilities of the individual skier. Do not ask a student to perform any exercises that might not be appropriate for the student.

Chairlift Loading and Unloading

Safety is the key!! If needed, ask the lift operator to slow down or stop the chair. For more information about chairlift procedures, including emergency procedures, see Chapter 2, "Safety Procedures and Policies" in the SKIFORALL Volunteer Manual.

Keys to success:

- Explain to the student what will happen and what you need the student to do. Typically, outriggers should be in skiing position when the chair comes to avoid catching the brake on the snow.
- Communicate with the lift operators at both the top and the bottom of the lifts. Never assume they know or remember what you need. Report any problems with lift ops to your Lead Volunteer.
- When unloading, the outriggers should be in skiing position. Have the skier stand up and lean forward on the outriggers to unload.
- The first time the student rides the chairlift, slow down or stop the lift when loading and ask the lift operator to warn the operator at the top of the lift. Stop the lift for unload.



Lesson Plan: Introduction to Equipment

Goals

- Introduce the equipment. Explain functional aspects and safety features.
- Teach appropriate body position — neutral athletic stance:
- Flexed ankle, knee, hips, centered over the foot. Outriggers placed in front of the binding.
- Show how outriggers work: walking position, skiing position, braking position.
- Explain the safety code.

Teaching Tips

- Remember to pace the lesson to avoid tiring out the skier. Provide opportunities to sit down and rest the leg.
- Note any adjustments to the equipment on the skier's progress report.
- If the skier is bending over too much at the waist, you may need to lengthen the outriggers.

Exercises

- Demonstrate how to get into the ski bindings using the outriggers.
- Demonstrate the appropriate body position and balance.
- Demonstrate use of outriggers. Have student practice switching outriggers from crutch to skiing position.

❖ NOTE: Adapt the exercises to the ability of the student. Not all exercises are appropriate for all three-track skiers. Use common sense.

Skills Concept (BERP) Review

- ◆ **Balancing movements** — Maintain balance while moving torso forward and back and outriggers up/down/out.
- ◆ **Edge-control movements** — Maintain a flat ski.
- ◆ **Rotary movements** — Turn head and upper body.
- ◆ **Pressure-control movements** — Move torso forward and back.



Lesson Plan: Flatland Drills

Goals

- Become familiar with the equipment on flat terrain.
- Focus on developing good balance, good body position.
- Learn how to move around on flats using outriggers.
- Learn importance of a flat ski.
- Learn side step (or equivalent).
- Learn braking techniques.

Teaching Tips

- ***Don't be afraid to spend extra time on the flats!*** Run through all of the movement patterns in the safe environment before moving to the chair lift.
- Watch for fatigue, especially in skiers who normally walk with a prosthesis. Provide opportunities to rest as needed.
- Pick terrain for safety.
- Introduce the safety code.

Exercises

- Pushing on flats with flipski up propelling forward like crutches.
- Pushing on flats with flipski down at a 45-degree angle to ski.
- Side step (imagine going up stairs sideways)
- Follow the leader in a circle right and left.
- Explain what to do during a fall. Emphasize the importance of avoiding the outriggers and protecting the stump. Show the student how to get up from a fall.

❖ NOTE: Adapt the exercises to the ability of the student. Not all exercises are appropriate for all three-track skiers. Use common sense.

Skills Concept (BERP) Review

- ◆ **Balancing movements** — Static balance shown by tall yet relaxed stance.
- ◆ **Edge-control movements** — Emphasize for side step and for pushing with outriggers minimize for straight run and turning on a flat ski.
- ◆ **Rotary movements** — Aid in tracking a straight ski as well as when pivoting the ski to walk in a circle.
- ◆ **Pressure-control movements** — Maintain balance while standing and moving.



Lesson Plan: Straight Run

Goals

- Add movement to flatland drills by having skier do a straight run.
- Challenge the skier's balance while focusing on maintaining correct body positioning and athletic stance.

Teaching Tips

- Outriggers slightly ahead of boot, shoulder-width apart. Use the outriggers for balance, not weight bearing.
- Encourage athletic stance. Emphasize head up looking forward.
- Use terrain that allows for a natural stop.
- As student becomes more comfortable, increase speed and length of the straight run.
- Review how equipment is fitting now that the student has spent some time in it.
- Safety tips are cool.

Exercises

- Gliding wedge (outriggers always stay straight on the snow).
- Straight run to a stop using outrigger brakes.
- Straight run change ups: lifting outriggers off snow, braking and releasing. Experiment with balance.

❖ NOTE: Adapt the exercises to the ability of the student. Not all exercises are appropriate for all three-track skiers. Use common sense.

Skills Concept (BERP) Review

- ◆ **Balance movements** — Tall relaxed stance, not leaning too much on outriggers.
- ◆ **Edge-control movements** — Minimal at this stage. Maintain a flat ski.
- ◆ **Rotary movements** — Minimal rotary adjustments to maintain straight run.
- ◆ **Pressure-control movements** — Maintain equal pressure on outriggers.



Lesson Plan: Beginning Wedge Turn Equivalent (on the flats)

Goals

- Learn how to use turns to change direction, control speed and to stop.
- Work on becoming more comfortable with turns to the “weaker side.”
- Learn to ride the chair lift.

❖ NOTE: Adapt the exercises to the ability of the student. Not all exercises are appropriate for all three-track skiers. Use common sense.

Teaching Tips

- Do not move to the chairlift until the student can comfortably make turns and stop.
- Most three-track skiers find turning on the inside edge much easier than on the outside edge. Practice all drills on the stronger side first. Use drills like garlands to allow student to slowly become comfortable with turning on the outside edge.
- Encourage flexion and extension to assist in turning. It may help to exaggerate it during the initial phases.
- While it may be necessary to use upper body rotation to initiate first turns, it will be helpful to promote foot/leg steering as soon as possible.
- Outriggers in ski position to load and offload chair.

Exercises

- From straight run, add small turns in both directions. Begin by looking in direction of the turn. Increase amount of turn as it becomes more comfortable.
- From a straight run turn to stop. (stump side first) Repeat for other side.
- Mock practice loading chair lift. Explain what to do with the outriggers.
- Practice traversing.
- Uphill Christy Fan progressions — allow student to become comfortable with turning uphill to slow down and stop.
- Garlands — focus on either turn initiation or finishing the turn. Show how leaning forward and looking downhill starts a turn and how returning to neutral position helps end a turn.

Skills Concept (BERP) Review

- ◆ **Balancing movements** — Maintain balance while moving.
- ◆ **Edge-control movements** — Maintain flat ski, until speed and pitch require increased edge angle.
- ◆ **Rotary movements** — Use turning forces closest to the snow.
- ◆ **Pressure-control movements** — Apply pressure on cuff of boot to aid turn.



Lesson Plan: Wedge Christie Turn Equivalent

Goals

- Control speed using turn shape and terrain instead of outrigger braking. Increase size and variety of turns on beginner terrain.
- Introduce opening-the-door concepts for turning. Practice statically first.
- Begin introducing edging control by encouraging outrigger matching.
- Initiate turns faster, switching between medium- and short-radius turns.
- Increase fore/aft pressure movements and countering during turns for more active crossover.

Teaching Tips

- When introducing a new skill choose terrain for success.
- Slight rise to initiate and sink to steer.
- Some of these drills are difficult if done too slowly.
- Work on more active outrigger use as well as more dynamic body movement. Encourage matching of outriggers throughout turn, but keep the open-the-door technique simple. Do not introduce countering or reaching downhill.
- Make sure student is using rotation of the body to turn instead of leaning.
- Follow basic ATS progressions as much as possible.
- Work a safety tip into the lesson whenever appropriate.

Exercises

- MILEAGE!! Practice variety of turn shapes.
- Uphill Christie Fan progressions — experiment with body positions.
- Falling leaf — try leaning too far forward, too far back, centered and notice differences.
- Side slipping — begin experiments with edging. The body stays down the hill.
- Open-the-door — work on one arm at a time and with outriggers in different positions. Have student feel the differences.
- Garlands — experiment with opening the door during garlands.

❖ NOTE: Adapt the exercises to the ability of the student. Not all exercises are appropriate for all three-track skiers. Use common sense.

Skills Concept (BERP) Review

- ◆ **Balancing movements** — Quiet upper body aids in balance recovery.
- ◆ **Edge-control movements** — Create edge angles with foot, knee, hip.
- ◆ **Rotary movements** — Steering with the foot.
- ◆ **Pressure-control movements** — Leg contact with boot cuff. Start to experiment with rise and sink and how that affects turn initiation and completion.



Lesson Plan: Parallel Turns and Beyond

Goals

- Skiing any run, including black diamonds, in control with more active and controlled turning.
- Ski all snow conditions.
- More active outrigger use, reaching down the fall line with outriggers.
- Greater upper and lower body separation.
- Carving turns.

Teaching Tips

- Explore the rest of the mountain, but keep to appropriate terrain for the skier's ability.
- Emphasize a countered stance.
- Promote “open door” to move the center of mass into the new turn.
- Review the safety code.

Exercises

- Traverse a bump run inside a “box.”
- Turn on top of bump and slide down back.
- Turn between bumps.
- Ski in and out of powder along a groomed run.
- Leapers.
- Ski in a race course.

❖ NOTE: Adapt the exercises to the ability of the student. Not all exercises are appropriate for all three-track skiers. Use common sense.

Skills Concept (BERP) Review

- ◆ **Balancing movements** — Quiet controlled movements make balance recovery much easier.
- ◆ **Edge-control movements** — Look for edge angles created with feet knees and hips.
- ◆ **Rotary movements** — Upper-lower body separation aids in low body steering.
- ◆ **Pressure-control movements** — Flexion and extension will aid in appropriate ski to snow pressure.

