Special Olympics

SNOWSHOEING COACHING GUIDE

Planning a Snowshoeing Training and Competition Season

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Goals

Realistic yet challenging goals for each athlete are important to the motivation of the athlete both at training and during competition. Goals establish and drive the action of both training and competition plans. Sport confidence in athletes helps to make participation fun and is critical to the athlete's motivation. Please see the Principles of Coaching section for additional information and exercises on goal setting.

Benefits of Goal Setting

- Increases athlete's level of physical fitness
- Teaches self-discipline
- Teaches the athlete sports skills that are essential to a variety of other activities
- Provides the athlete with a means for self-expression and social interaction

Goal Setting and Motivation

Developing Self-Confidence through Goal Setting

Accomplishing goals at practice through repetition in settings similar to the competition environment will instill confidence. Setting goals is a joint effort between athletes and coaches. The main features of goal setting include:

1. Goals must be structured as short-term, intermediate and long-term.
2. Goals should be viewed as stepping stones to success.
3. Goals must be accepted by the athlete.
4. Goals should vary in difficulty — from easily attainable to challenging.
5. Goals must be measurable.
6. Goals should be used to establish the athlete's training and competition plan.

Athletes with or without an intellectual disability may be more motivated by accomplishing short-term goals than long-term goals; however, do not be afraid to challenge athletes. Include athletes in setting their personal goals. Awareness of why the athlete is participating is also important when setting goals. There are participation factors which may influence motivation and goal setting:

- Age appropriateness
- Ability level
- Readiness level
- Athlete performance
- Family influence
- Peer influence
- Athlete preference

Performance Goals versus Outcome Goals

Effective goals focus on performance, not outcome. Performance is what the athlete controls. Outcomes are frequently controlled by others. An athlete may have an outstanding performance and not win a contest because other athletes have performed even better. Conversely, an athlete may perform poorly and still win if all other athletes perform at a lower level. If an athlete's goal is to run a personal best time in a competition, the athlete has greater control in achieving this goal than winning. This performance goal ultimately gives the athlete more control over his/her performance.

Motivation through Goal Setting

Goal setting has proved to be one of the most simple and effective motivational devices developed for sport within the past three decades. While the concept is not new, today the techniques for effective goal setting have been refined and clarified. Motivation is all about having needs and striving to have those needs met. How can you enhance an athlete's motivation?

1. Provide more time and attention to an athlete when he/she is having difficulty learning a skill.
2. Reward small gains of achievement in skill level.
3. Develop other measures of achievement outside of winning.
4. Show your athletes that they are important to you.
5. Show your athletes that you are proud of them and excited about what they are doing.
6. Fill your athletes with self-worth.

Goals give direction. They tell us what needs to be accomplished. They increase effort, persistence and the quality of performance. Establishing goals also requires that the athlete and coach determine techniques for how to achieve those goals.

Measurable and Specific

Effective goals are very specific and measurable. Goals stated in the form of "I want to be the best that I can be!" or "I want to improve my performance!" are vague and difficult to measure. It is positive sounding but difficult, if not impossible, to assess whether they have been reached. Measurable goals must establish a baseline of performance recorded during the past one or two weeks for them to be realistic.

Difficult, but Realistic

Effective goals are perceived as challenging, not threatening. A challenging goal is one perceived as difficult but attainable within a reasonable amount of time and with a reasonable amount of effort or ability. A threatening goal is one perceived as being beyond one's current capacity. Realistic implies that judgment is involved. Goals based upon a baseline of performance recorded during the past one or two weeks are likely to be realistic.

Long- versus Short-Term Goals

Both long- and short-term goals provide direction, but short-term goals appear to have the greatest motivational effects. Short-term goals are more readily attainable and are stepping stones to more distant long-term goals. Unrealistic short-term goals are easier to recognize than unrealistic long-term goals. Once they are identified, unrealistic goals can then be modified before valuable practice time has been lost.

Positive versus Negative Goal Setting

Positive goals direct what to do rather than what not to do, whereas negative goals direct our attention too heavily to the errors we wish to avoid or eliminate. Positive goals also require coaches and athletes to decide how they will reach those specific goals. Once the goal is decided upon, the athlete and coach must determine specific strategies and techniques which allow that goal to be successfully attained.

Set Priorities

Effective goals are limited in number and meaningful to the athlete. Setting a limited number of goals requires that athletes and coaches decide what is important and fundamental for continued development. Establishing a few carefully selected goals also allows athletes and coaches to keep accurate records without becoming overwhelmed with record keeping.

Mutual Goal Setting

Goal setting becomes an effective motivational device when athletes are committed to achieving those goals. When goals are imposed or established without significant input from the athletes, motivation is unlikely to be enhanced.

Set Specific Time Lines

Target dates provide urgency to an athlete's efforts. Specific target dates tend to eliminate wishful thinking and clarify which goals are realistic and which are not. Time lines are especially valuable in high-risk sports where fear often promotes procrastination in learning new skills.

Formal versus Informal Goal Setting

Some coaches and athletes think that goals must be set in formal meetings outside of practice and require long periods of thoughtful evaluation before they are decided upon. Goals are literally progressions that coaches have been using for years but are now expressed in measurable performance terms rather than as vague, generalized outcomes.

Goal Setting Domains

When asked to set goals, athletes typically focus on the learning of new skills or performances in competitions. A major role of the coach is to broaden the athlete's perception of those areas, and goal setting can be an effective tool. Goals can be set to enhance fitness, improve attendance, increase intensity, promote sportsmanship, develop team spirit, find more free time or establish consistency.

Goal Setting Summary

Setting goals is a joint effort between the athlete and coach. Following are the main features of goal setting:

Structured into short-term and long-term

- Stepping stones to success
- Must be accepted by the athlete
- Vary in difficulty from easily attainable to challenging
- Must be measurable

Short-Term Objective

- Learning snowshoeing in a fun environment

Long-Term Goal

The athlete will acquire basic snowshoeing skills, appropriate social behavior and functional knowledge of the rules necessary to participate successfully in snowshoeing competitions.

Assessing Goals Checklist

1. Write a goal statement.
2. Does the goal sufficiently meet the athlete's needs?
3. Is the goal positively stated?
4. Is the goal under the athlete's control?
5. Is the goal a goal and not a result?
6. Is the goal important enough to the athlete that he/she will want to work toward achieving it?
7. What barriers might the athlete encounter in working toward this goal?
8. What does the athlete need to learn?
9. What risks does the athlete need to take?

Planning a Snowshoeing Training Season

It's important to start off the snowshoeing training season with a plan for the season. A training season plan must take into account the competition schedule and the development and preparation of the athletes for those competitions. Season plans consist of three components: Preseason, In-season and Postseason.

The training season plan should incorporate the components that will allow the athletes to reach or attain the goals that they set at the beginning of the season. The goals may vary widely and should thus be adaptable as practical to the individual athletes' goals, which may range from competition to a weekly workout.

Developing a Season Plan

The snowshoeing coach needs to prepare for the upcoming season. The list below offers some suggestions on getting started.

- Improve knowledge of snowshoeing and coaching skills by attending training sessions and clinics.
- Recruit assistant coaches.
- Locate a facility for practice sessions.
- Arrange for needed equipment.
- Recruit volunteers to transport the athletes to and from practice and/or competition.
- Recruit athletes.
- Ensure that all prospective snowshoeing athletes are registered Special Olympics athletes.
- Establish goals and draw up a training plan such as the one provided later in this guide.
- Try to schedule at least one training session per week.
- If possible, develop a home training program.

Preseason

Maintaining overall fitness during the spring, summer and fall is the best preparation for a snowshoeing season. A steady progression to build up strength and conditioning is best. Running is the best preparation for snowshoeing.

In-season

This is where the plan comes into action. Plan each practice session according to what needs to be accomplished. Training can be done on snow, sand or soft grass. Just because there is no snow, it doesn't mean that training cannot occur. A limited amount of training in snowshoes on these surfaces will not greatly damage the equipment and will help athletes familiarize themselves with the sport if no snow is present.

During the first practice, administer the Sports Skills Assessment Test and set the athletes' goals according to individual ability levels. Orient the athletes to the facility and their equipment. The goals and skills of the athletes should be monitored periodically throughout the season with modification to the training session to enable the athletes to meet their goals. As competition approaches, try to simulate race conditions for athletes. Relays are a good way to prepare the athletes for the excitement of racing and teamwork. If on-snow time is limited, emphasize conditions that simulate races or race pace as much as possible when you do get a chance to be on snow.

Postseason

Once the season is over, this is the time to thoroughly evaluate the athletes' progress against goals set and provide feedback to the athletes. Develop off-season training plans for those athletes who wish to train in the off-season. Off-season training plans should be consistent with the athletes' overall training goals.

Evaluate the training plan and make modifications for next year's season. Request feedback from athletes, assistant coaches, parents, etc., for use in modifying next year's training program.

Snowshoeing Training Session

Planning a Snowshoeing Training Session

Each training session needs to contain the same essential elements. The amount of time spent on each element will depend on the goal of the training session, the time of season the session is in and the amount of time available for a particular session. The following elements need to be included in the training session; however, times may vary depending on the specific requirements of the session.

The Warm-up	10-15 minutes
Specific Event Workout	15-20 minutes
Conditioning or Fitness Workout	15-20 minutes
The Cool-down	10-15 minutes

NOTE: Please refer to the Teaching Snowshoeing Skills Sections in each area for more in-depth information and guidance on these topics.

Principles of Effective Training Sessions

Keep all athletes active	Athlete needs to be an active listener
Create clear, concise goals	Learning improves when athletes know what is expected of them
Give clear, concise instructions	Demonstrate – increase accuracy of instruction
Record progress	You and your athletes chart progress together
Give positive feedback	Emphasize and reward things the athlete is doing well
Provide variety	Vary exercises – prevent boredom
Encourage enjoyment	Training and competition is fun; help keep it this way for you and your athletes
Create progressions	Learning is increased when information progresses from: • Known to unknown – discovering new things successfully • Simple to complex – seeing that "I" can do it • General to specific – this is why I am working so hard
Plan maximum use of resources	Use what you have and improvise for equipment that you do not have – think creatively
Allow for individual differences	Different athletes, different learning rates, different capacities

Tips for Conducting Successful Training Sessions

1. Know what you want to do and how you plan to do it before the session.
2. Assign assistant coaches their roles and responsibilities in accordance to your training plan.
3. The two most important elements you can bring to practice are a high level of enthusiasm and a willingness to be flexible.
4. When possible, have all equipment and stations prepared before the athletes arrive.
5. Arrange the athletes in a semicircle in front of you.
6. Introduce and acknowledge coaches and athletes.
7. Review intended program with everyone. Keep athletes informed of changes in schedule or activities.
8. As you speak, make eye contact with all athletes. Speak simply and clearly. Do not give long demonstrations and explanations.
9. Ask questions to ensure that everyone knows what to do.
10. Encourage athletes to imitate your technique.
11. Keep everyone moving.
12. Watch for fatigue and listen to athletes who say they are cold.
13. Emphasize "doing" rather than "watching." Athletes will learn best by participating in a variety of fun exercises and games. Create a playground in the snow, which incorporates snowshoeing skills. For example, you could use obstacles or existing trees or shrubs to create a course to follow. As the athletes become more proficient, advanced terrain will replace the challenge of games.
14. Keep the activities challenging and fun and always provide positive feedback to the athletes.
15. Keep the **Fun** in fundamentals.
16. Alter the plan according to weather, the facility and the needs of the athletes.
17. Give the athletes plenty of time to become familiar with a new skill before teaching another one.
18. Keep drills and activities brief so athletes do not get bored. Keep everyone busy with an exercise even if it is rest.
19. If an activity is going well, it is often useful to stop the activity while interest is high. Change activities before the athletes lose interest.
20. Devote the end of the practice to a group activity that incorporates challenge and fun, so athletes have something to look forward to.
21. Summarize the session and announce arrangements for next session.

Tips for Conducting Safe Training Sessions

Preparing for Safety

1. The head coach ensures that the rules are set before the first practice session.
2. Choose a safe location for practice. Remove obstacles from area.
3. Avoid narrow, tree-lined and icy areas.
4. Choose terrain or trails appropriate to the athletes' skills.
5. Check all equipment for damage.
6. Check the first-aid kit: Restock supplies as necessary.
7. Provide emergency procedures. Train all athletes and coaches in these procedures.
8. Identify the nearest phone accessible during practice or have a working cellular telephone on site.
9. Establish clear rules for behavior at the first practice. Repeat and enforce them throughout the year.
10. Everyone must keep their poles down if used.
11. No one snowshoes alone. Require the buddy system.
12. Encourage everyone to wear appropriate clothing and eyewear.
13. Be aware of the weather and how it may change.
14. Provide proper stretching exercises after warming up at the beginning of each practice.
15. Provide activities that will improve general fitness levels. Fit athletes are less likely to get injured.
16. Make practices active; keep everyone moving.
17. Provide one-on-one instruction whenever possible.
18. Wear non-breakable sunglasses or goggles.
19. If snowshoeing on a trail, stay to the right.
20. Check equipment often.
21. Recognize that the metal claws on some snowshoes can be sharp and should be handled with care.

Training Program

Ideally, athletes need to train – compete – train – compete to achieve optimum benefits from sport participation. Your creativity is the key to helping athletes learn and enjoy themselves at the same time in both the training and competing environments. The following sample eight-week training program may help you to develop individualized training programs for your athletes. Please incorporate parts of this program as they meet the needs of your snowshoers.

Week One

1. Make introductions and do an overview of season schedule
2. Teach warm-up and stretching routines
3. Introduce basic snowshoeing skills
4. Play an active game
5. Cool down
6. Make closing remarks and distribute home training plan

Week Two

1. Warm-ups and stretches
2. Review previously taught skills
3. Administer Snowshoe Skills Assessment
4. Play a fun game
5. Cool-down and remarks

Week Three

1. Warm-ups and stretches
2. Review previously taught skills
3. Introduce new skills
4. Break athletes into skill groups for specific instruction
5. Play a short game or mini competition
6. Cool-down and remarks

Week Four

1. Warm-ups and stretches
2. Review previously taught skills
3. Introduce new skills
4. Break into skill groups
5. Go on a long-distance hike appropriate to various skill levels
6. Cool-down and remarks

Week Five

1. Warm-ups and stretches
2. Review previously taught skills
3. Introduce new skills
4. Break into skill groups
5. Practice sprint starts and speed races
6. Have a fun race
7. Cool-down and remarks

Week Six
1. Warm-ups and stretches 2. Review previously taught skills 3. Introduce new skills 4. Break into skill groups 5. Practice relay races or play a game 6. Cool-down and remarks
Week Seven
1. Warm-ups and stretches 2. Have a mini competition 3. Fitness training 4. Cool-down and remarks
Week Eight
1. Warm-ups and stretches 2. Work on weaknesses seen in mini competition 3. Play a fun game 4. Cool-down 5. Coordinate for upcoming event

Snowshoeing Practice Competitions

Typically, the more we compete, the better we get. A practice competition is a good way to assess the athletes. It can be just a race between two teams or a small individual skill (for example, uphill techniques) tournament of local athletes. Expand or add to your schedule as many competition opportunities as possible. Here are a few suggestions:

1. Host practice competitions with adjacent local Programs.
2. Ask the local high school whether your athletes can compete with them in practice meets.
3. Join the local community snowshoeing league, club and/or association.
4. Create your own snowshoeing league or club in your community.
5. Incorporate competition components at the end of some training sessions.

Increasing competition opportunities for athletes is one of the coach's responsibilities. All athletes may compete at an end-of-the-season local event; however, only a small percentage of athletes may go on to the highest level of competition offered by the Program. Competition is a way to measure progress and demonstrate skills mastered. One opportunity per year is not enough.

Snowshoeing Skills Assessment

Athlete Name _____ **Start Date** _____

Coach Name _____

Instructions

1. Use tool at the beginning of the training/competition season to establish a basis of the athlete's starting skill level.
2. Have the athlete perform the skill several times.
3. If the athlete performs the skill correctly three out of five times, check the box next to the skill to indicate that the skill has been accomplished.
4. Schedule several Assessment Sessions into your program.
5. Snowshoers may accomplish skills in any order. Athletes have accomplished this list when all possible items have been achieved.

Stretching

☐ Knows stretches for calves, hamstrings, groin, quadriceps, triceps and shoulders

☐ Performs stretches

Dry Land or Inside Activity Warm-Ups

☐ Knows warm-up exercises

☐ Performs dry land warm-up exercises

☐ Performs on-snow exercises

Putting on Snowshoes

☐ Identifies parts of a snowshoe

☐ Identifies left and right snowshoes

☐ Positions foot properly

☐ Tightens straps securely

Removing Snowshoes

☐ Loosens straps and removes foot from shoe

Avoiding Snowshoe Overlap

☐ Stands on snowshoes without assistance

☐ Understands the concept of snowshoe overlap

☐ Spreads feet/snowshoes farther apart and moves them closer together

Walking Forward

☐ While walking, see if overlap occurs

Stopping and Recovery

- ☐ Stops intentionally
- ☐ Gets up without assistance

Turning

- ☐ Stands on one leg
- ☐ Takes long enough strides to avoid overlapping snowshoes
- ☐ Plants snowshoe flat on snow

Climbing Hills

- ☐ Ascends the most direct route on the hill
- ☐ Stamps with the toe to dig the cleat into the snow
- ☐ Uses arms to power up the hill

Descending Hills

- ☐ Keeps the weight forward
- ☐ Takes long striding, gliding steps, being careful not to over stride
- ☐ Identifies and goes down the fall line

Sprint Starts

- ☐ Stands upright with one leg in front, ready to start, with knees bent
- ☐ Thrusts upward with rear leg and forward pumping arms
- ☐ Uses the front leg as an anchor serving as the base for the thrust
- ☐ Performs the sprint start without falling

Sprinting

- ☐ Synchronizes arm and leg movements for maximum speed (right arm goes forward as left leg goes forward)
- ☐ Moves in a straight line

Distance Snowshoeing

- ☐ Breathes effectively
- ☐ Controls arms and keeps elbows in
- ☐ Runs by lifting the feet as little as possible
- ☐ Makes short strides to conserve energy
- ☐ Runs an even-paced race

Daily Performance Record

The Daily Performance Record is designed for the coach to keep an accurate record of the athlete's daily performances while learning a sports skill. There are several reasons why the coach can benefit from using the Daily Performance Record.

1. The record becomes a permanent documentation of the athlete's progress
2. The record helps the coach establish measurable consistency in the athlete's training program.
3. The record allows the coach to be flexible during the actual teaching and coaching session, breaking down the skills into specific, smaller tasks that meet the individual needs of each athlete.
4. The record helps the coach choose proper teaching methods, conditions and criteria for evaluating the athlete's performance of the skills.

Using the Daily Performance Record

At the top of the record, enter the coach's name, the athlete's name, and the snowshoeing event. If more than one coach works with the athlete, they should enter the dates that they work with the athlete next to their names.

Before the training session begins, the coach decides what skills will be covered. The coach makes this decision based on the athlete's age, interests and mental and physical abilities. The skill needs to be presented as a statement or a description of the specific exercise that the athlete must perform. The coach enters the skill on the top line of the left-hand column. Each subsequent skill is entered after the athlete masters the previous skill. Of course, more than one sheet may be used to record all of the skills involved. Also, if the athlete cannot perform a prescribed skill, the coach may break down the skill into smaller tasks that will allow for the athlete's success at the new skill.

Conditions and Criteria for Mastering

After the coach enters the skill, then decide on the conditions and criteria by which the athlete must master the skill. Conditions are special circumstances which define the manner in which the athlete must perform a skill; for example, "given a demonstration, and with assistance." The coach should always operate under the assumption that the ultimate conditions in which the athlete masters a skill are "upon command and without assistance," and therefore, does not have to enter these conditions in the record next to the skill entry. Ideally, the coach arranges the skills and conditions so that the athlete gradually learns to perform the skill upon command and without assistance.

Criteria are the standards that determine how well the skill must be performed. The coach needs to determine a standard that realistically suits the athlete's mental and physical abilities; for example, "perform a distance of 30 meters, 60 percent of the time." Given the varied nature of skills, the criteria might involve many different types of standards, such as amount of time, number of repetitions, accuracy, distance or speed.

Dates of Sessions and Levels of Instruction Used

The coach may work on one task for a couple of days and use several methods of instruction during that time to progress to the point where the athlete performs the task upon command and without assistance. To establish a consistent curriculum for the athlete, the coach must record the dates of work on particular tasks and the methods of instruction used on those dates.

Event: _____ **Athlete's Name** _____

Skill: _____ **Coach's Name** _____

Skill Analysis	Conditions & Criteria	Dates & Instruction Methods	Date Mastered

Weekly Home Training

Each athlete needs to recruit a partner who will train with him or her at home. This can be a sibling, parent or friend. The athlete and partner must push each other to make training effective.

Warm-Up Exercises	Instructions
Walking	Walk around in the snow for two minutes, and then jog in place for two minutes.
Arm Circles	Hold arms out to sides at shoulder height; make 15 small circles rotating arms forward. Rest, repeat arm circles by rotating arms backward 15 times.
Calf/Achilles Stretch	Stand facing a wall or fence with one leg in front of the other. Bend your forward leg slightly. Bend at the ankle of your back leg. Remember, you do not want to feel pain, only slight tension of the muscle stretching.
Push-Ups	Kneel down and place your hands on the ground in front of body, shoulder width apart. With a straight back, move your feet back behind you until you are on your toes. Your weight is on both your hands and feet. Slowly bend your arms until they are parallel to the ground. You chest will drop 4-5 inches from the ground. Push up to the starting position. Repeat five times. Try and work up to 10 or more. Remember to fully extend your arms in the start position, with a straight back. You can help keep a straight back by squeezing your stomach muscles.
Sit-Ups	Lie on your back with your knees bent. Your hands can be on your chest or shoulders or on the side with your fingers touching your ears. Your elbows are out to the side. Keep back straight as you slowly lift your shoulders, coming all the way up to a sitting position. Squeeze your stomach muscles as you slowly return to the start position. Repeat 10 times. Try and work up to two or three sets of 10. Rest for 30 seconds between sets. Remember, the wider apart the hands. the more the athlete works on the chest muscles.
Exercise for the Week (Exercise a minimum of 10 minutes)	
1. Set up a 10-meter course 2. Practice snowshoe starts 3. Race 10 times	Each week, increase the distance to 25 meters, then 50, then 100. Time each race to seek improvement. Practice putting on snowshoes, falling down and getting up. For distance snowshoers, jog at least two times a week in addition to regular training sessions.

Snowshoeing Attire

Clothing must be appropriate to the weather conditions. Incorporate the "25° F rule" when training and competing. This means that if the temperature outside is 40° F (4.4° C), dress as if it is 65° F (18.3° C). This is how warm you will feel from the heat generated by your workout. It is best to dress in layers so you can add or subtract clothes as needed. Always bring too many clothes instead of too few.

Socks

Socks are a personal preference, but it is suggested that a wool or blended-material ski or hiking sock be used for snowshoeing. Definitely avoid cotton socks because they absorb moisture, are poor insulators and will result in blisters. It is recommended that liner socks made of synthetic or natural fibers be worn underneath insulated socks. The liners will help wick away perspiration and moisture from the foot and add more insulation layers of air. The liners will also absorb the friction between the feet and outer socks to prevent blisters.

Footwear

Any type of shoe can be used. Running shoes and cross-training sneakers are popular because of their light weight and comfort. The heavier the shoe, the more weight the back will feel while running. Boots may be used in colder weather, but be sure that there is flexibility in the ankles and that the boot can remain securely attached to the foot while walking and running. The most important thing is to keep the feet dry and comfortable. It is recommended that the shoes fit comfortably with the socks that will be worn while snowshoeing. Booties that fit over the shoe and cover the space between the top of the shoe and the bottom of the pants are very useful. Neoprene cycling booties are great to use over running shoes.

The key in snowshoeing is that the boot or shoe is the interface with the snowshoe. The snowshoer's warmth comes from the exercise and layering, rather than bulky boots. Heavy boots will make it harder to snowshoe because they add weight. Additionally, they may cause excessive foot perspiration, which can lead to cold feet very quickly.

Mukluks or moccasins can be used in combination with a traditional wood snowshoe and binding. Mukluks or moccasins can have a crepe/ rubber sole and felt insert to provide protection. Mukluks are known for being warm, comfortable and lightweight. These typically provide a good interface with the snowshoe.

Pants and Tops

Incorporate the three-layer system. It's simple and it works well.

Inside Layer

The inside (or inner or base) layer is the wicking layer. Long underwear made of synthetic materials, natural materials (silk) or treated materials will remove perspiration from the body. Both the upper and lower body should be covered by a wicking layer. A shirt that covers the neck and fits snugly at the wrists is an effective way to conserve body heat.

Middle Layer

The middle layer should be an insulating layer and consist of wool (sweater or pants), fleece (top or bottom) or treated material. Synthetic insulations or phase change treatments have also proven to be lightweight but very effective. This layer provides warmth by trapping a layer of air around the body.

NOTE: Except in extremely cold conditions, the legs do not need and would be constricted by this layer.

Outer Layer

Wind and snow are blocked by the weatherproof outer layer. For the legs, nylon wind pants are good. If wind pants are not available, choose looser-fitting synthetic sweatpants. A lined windbreaker or warm-up jacket works well on top. Clothing that uses laminates that are waterproof, windproof and breathable (allowing perspiration to leave the body) can be useful. Be aware that absorbent clothing such as cotton sweatpants will provide little protection from the wind and cold. Snowshoes tend to kick up loose snow on the legs and back, and this is best shed by a slick and smooth nylon outer layer. Snowshoeing can be a highly aerobic activity that can generate a tremendous amount of heat and require clothing to allow unrestrictive movement.

Consider the ability of your athlete, the weather and the distance of the event when deciding upon clothing for competition. For optimal competition, strive to dress your athlete in clothing that is lightweight, breathable, layered and slick on the outer surface, and that allows unrestrictive movement. Consider having the athlete wear a thick, heavy, easily removed jacket and pants over everything to keep warm between events. At many competitions, the greatest challenge is staying warm while standing around between events. These bulky layers should have the ability to be easily and quickly removed and put back on before and after events. Do not neglect an extra set of warm, dry clothes to change into for athletes whose competition clothes will get wet with perspiration during longer races.

Accessories

Knitted hats are necessary to keep heat from escaping through the head. Gloves or mittens with the same three layers—synthetic base, thermal insulation layer and wind/waterproof outer layer—are needed according to weather conditions. Suitable eye protection is recommended to protect the eyes from damaging ultraviolet rays and glare and from snow kicked up by the snowshoes. Polarized sunglasses will cut glare, and high-quality glasses will be less likely to fog. Remember that if the glasses fog up, a sunglass-friendly soft handkerchief should be used.

Snowshoeing Equipment

Securing proper equipment is essential for good, safe snowshoeing, so getting the correct type of snowshoe is the most important decision to make. There are two types of snowshoes: traditional wooden-framed snowshoes and metal snowshoes which are made from aluminum, rubber, and other "high tech" materials. To be competitive, it is recommended that a snowshoe specifically produced for competition be used. These snowshoes are lighter, smaller and asymmetrical (see explanation below).

Snowshoes

Shoe weight and size are critical in snowshoeing. It is estimated that one extra pound on the foot equals 5-10 pounds of weight on the back. Also, a narrower frame is better to keep the weight centered and the legs directly beneath the torso, so that the frame will not hit the lower legs as much. Body weight is a very small factor. Everyone will sink in dry, powdery snow no matter how big the snowshoes are, but even the heaviest athlete will be able to snowshoe in moist, compacted snow in smaller shoes. Keep the snowshoe as small as possible for the snow conditions. Rules state that the snowshoe must be at least eight inches wide and 25 inches long (20.5cm by 64 cm). This size works best for most adult athletes.




Snowshoe Anatomy

There are six parts to any snowshoe.

Frame

This is the outside of the snowshoe that gives it shape. It is made of aluminum, wood or extruded synthetic materials and may be in a symmetrical or asymmetrical form. The symmetrical frame centers the foot in the middle of the shoe while the asymmetrical frame is more in the shape of the foot, with a right and left shoe, allowing the feet to be closer together and eliminating the "snowshoe waddle." The toe of the frame is raised up and the tail is weighted to ensure

better movement and make sure that snow does not collapse on the shoe. Generally, the smallest frame that allows flotation on the snow is best for racing.

Binding System

This secures the athlete's shoe to the snowshoe. Look for a solid landing platform, little movement inside the binding, comfort and no contact with the frame. Wooden snowshoes have a binding that is typically made of leather and attached at the toe cord. The alternate form of binding for wooden snowshoes is lamp wick (1 ½-inch flat cotton cord); the use of lamp wick requires the footwear to be modified to include loops on each side.

Pivot System

This allows for normal walking motion. There is a hole in the decking that allows the toe of the foot to go into the snow and push off while the frame remains on the surface of the snow. The pivot system on a wooden showshoe is formed when the binding is attached to the snowshoe.

Toe Cords

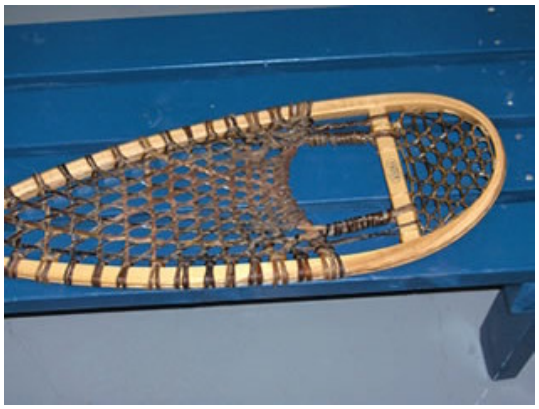
Toe cords are the part of snowshoes that connect the outer frame to the binding.

Crampons/ Cleats or Claws (Metal Snowshoe Only)

Spikes and claws grab the snow and provide traction when conditions are slippery. They are located beneath the binding, which also allows them to aid in pushing off. Rear traction devices under the snowshoe where the heel strikes are important for downhill traction and safety.

Decking

The decking material is attached to the frame and provides the majority of the flotation.



Poles

Most snowshoers do not use poles. Snowshoes provide much more traction, flotation and stability than a regular shoe, which helps most athletes negotiate slick, loose, deep and uneven snow with ease. Try to get your athletes to snowshoe without poles, if possible. Using poles is another action to coordinate when snowshoeing, and this will take more energy and motor control. If an individual can walk and run without poles when not wearing snowshoes, then he or she can snowshoe without poles. Certain athletes with very poor balance, strength or coordination may benefit from using poles. Ski poles that are long enough to reach from the ground to the elbow when the arm is hanging at rest are the proper length.