ALPINE SKIING
Training, Health, and Fitness Guide

A quick-start resource for all levels of coaches.

Table of Contents *Note- Page numbers in packet will not line-up with numbers listed below*

- Health and Fitness Talk 2-12
- Warmup and Stretching 13-25
- Sample practice plan 26

Partially sourced from: Special Olympics International Alpine Skiing Coaching Guide
HEALTH and FITNESS TALK

Suggestions for including a focus on year-round health and wellness in your sports practice.

“To be a great athlete, you need to be a healthy athlete.”

These discussions are laid out in balance, order, and accordance with Special Olympics Montana’s 8 weeks – 10 hours practice requirements. An included practice plan, which shows how these discussions can fit in a practice, is included in this same packet.

The goal of Health and Fitness Talk is to support the health, fitness, growth, and success of Special Olympics Montana competitors. It is designed to be used as a part of your practice season. The following discussions will provide competitors with the introductory knowledge to begin thought processes on:

- Identifying nutritious choices
- Balancing nutrition and portions
- Making healthy and balanced snack and meals choices
- The importance of hydration
- Identifying unhealthy beverage choices
- Understanding endurance and strength
- Understanding flexibility and balance
- Understanding the benefits and fun of exercise

If you are interested in a more in-depth Health and Fitness Program, explanations, examples, and lesson plans/guides, reach out to the Special Olympics Montana Senior Director of Innovation at 406-216-5327.

Practice Week #1 Discussion: NUTRITION: Eating right is important to your health and your sports performance. Eating right can be easy and enjoyable because there are many delicious healthy choices.

Your goal is to eat at least 5 total fruits and vegetables every day!

Tell your teammate the names of some Fruits:

- Fresh: Apples, Bananas, Berries, Grapes, Kiwi, Oranges
- Frozen Fruits
- Canned fruits (pick options with no added sugar)
- Dried fruits: Raisins, Bananas, Apricots

Tell your teammate the names of some Vegetables:

- Fresh: Asparagus Broccoli, Carrots, Cauliflower, Green Beans, Peppers, Squash
- Lettuces and Dark Leafy Greens
- Frozen Vegetables
- Salads
- Canned Vegetables
-What fruits can you have for breakfast? Lunch?
-What vegetables can you have for lunch? Dinner?

You know fruits and vegetables are important for your health, but sometimes it can be difficult to know what other foods you should be eating. Here is a list of the other food groups and some great choices in each group that make up a healthy meal or diet.

**Grains:**
- Brown or Wild, or Unpolished Rice
- Oatmeal
- Whole Grain Bread
- Whole Grain Pasta
- Whole Grain Crackers
- Tortilla
- Flatbread

**Diary:**
- Low-fat or Skim Milk
- Low-fat Cheese
- Low-fat, unsweetened yogurt (watch the sugar!)
- Cottage Cheese

**Meats and Beans (Protein):**
- Lean Meats
- Eggs
- Fish (frozen, fresh or canned)
- Nuts
- Beans

*Tell your partner the Grains you ate yesterday. Dairy?*
*Share with a teammate what protein (Meats & Beans) you had last night for dinner.*

**Practice Week #2 Discussion: BUILDING A HEALTHY PLATE:** From last time, you now know what types of foods to eat. Here is how to build a healthy plate for a meal or for a snack.

- Watch the amounts of food you put on your plate (share/discuss the “Perfect Portions” diagram below).
- Save junk food like desserts, chips and sodas for special occasions.
- Make half of your plate fruits or vegetables (see diagram below).
- Fill the other half with foods like whole grains, dairy, and protein.
- Add more fruits and vegetables to your meals.
- Keep snacks healthy and small.

*Tell your teammate how to build a healthy plate.*
*Name the 4 food groups that should make up a healthy meal.*
Here is a fun way to remember how much to eat when you have a serving. The size of sports equipment on the left is about the same size as one serving of the foods on the right.

- Base-ball = 1 serving of fruit
- Hockey = 1 serving of pasta
- Tennis ball = 1 serving of nuts
- 90s = 1 serving of cheese or milk

Make half of your plate fruits or vegetables. Fill the other half with foods like whole grains, dairy, and protein.
Practice Week #3 Discussion: **HEALTHY SNACK IDEAS:** Snacking is a great way to make sure you are full of energy. It is important to keep your snacks healthy. Here are a few ideas for tasty snacks that are packed with fruits and vegetables.

- Apple slices dipped in peanut butter
- Low-fat unsweetened yogurt with berries
- Low-fat cottage cheese with tomatoes
- Carrots or peppers dipped in hummus
- Celery topped with peanut butter and raisins

*What snacks do you like the most? Are these healthy snacks or junk food snacks?*

*Tell your partner a healthy snack you could make for yourself.*

*Are these healthy snacks (thumbs up) or junk food snacks (thumbs down)?*

- **Doritos**
- **Banana with peanut butter**
- **Snickers candy bar**
- **A half cup of nuts**
- **Carrot sticks**
- **A cookie**

**HEALTHY MEALS:** Add more fruits and vegetables to your meals. You can make any meal more nutritious with these simple suggestions.

**Breakfast**

- Have a piece of fruit with your meal.
- Vegetables like spinach, tomatoes, onions and peppers make great toppings on omelettes.
- Dried or cut fruit make great toppings on cereal and oatmeal as well.

**Lunch**

- Top sandwiches with plenty of vegetables like lettuce, tomatoes, cucumbers, peppers, and sprouts.
- Try apples, carrots, or celery for a crunchy side.
- Add leftover or canned vegetables like peas and carrots to soups.
- Make a salad with your choice of meat, cheese, lots of vegetables, and an oil-based dressing.

**Dinner**

- Add vegetables like broccoli, squash, or peppers to pastas.
- Make a stir-fry with brown rice, your favorite lean meat or seafood, and vegetables.
- Add a side of steamed vegetables or a salad to any meal.
- Have some fruit as a healthy dessert.
-What healthy items can you add to a salad (carrots, tomatoes, sunflower seeds, etc.)?
-Do you like oatmeal? What can add to oatmeal (banana, blueberries, etc.)
-Tell you partner how are you doing with the goal of having half your plate be fruits and vegetables.

**Practice Week #4 Discussion:** **HYDRATION:** Water is another important fuel for sports and for life. Drinking the right amount of water is important for your health and can also help your athletic performance.

Your goal is to drink 5 bottles of water every day! Your water bottle should be 16-20oz or 500-600ml. Drink out of a sports water bottle to track your water intake. Sports bottles are refillable and can hold 16-20oz or 500-600ml of water.

-Do you have a water bottle? Do you take it with you when you go places? Do you bring it with you to practice?
-Are you drinking water with your meals?

**SIGNS OF DEHYDRATION:** Water helps to keep your body working properly. You lose water when you go to the bathroom, sweat, exercise or even breathe. If you lose too much water without drinking more, your body won’t work as well. This is called dehydration.
**Signs of Dehydration:**
- You feel thirsty
- You are tired or sluggish
- You have a headache
- Your mouth is dry
- Your urine is dark yellow or brown

-Tell your teammate two of the signs of dehydration.
-Have you ever been dehydrated? How did you know? How did you feel?

**Practice Week #5 Discussion:** **HEALTHY BEVERAGE CHOICES:** There are many beverage options available, but some of them are healthier choices than others. This guide can help you make the best choices to stay hydrated and perform your best.

-What is your favorite thing to drink? How often do you drink it (most days, sometimes, special occasions)?
-What is the best thing to drink (water)? Why (no sugar)?

**Sodas, energy drinks, and sports drinks are NOT good beverage choices.**
Sodas, energy drinks, and sports drinks have extra sugar and can make you gain weight. Energy drinks and many sodas also have caffeine. Caffeine does not help you stay hydrated.

**Moderate amounts of low-fat milk and 100% juice are also good choices in small amounts.**
Low-fat milk and 100% fruit juice are good choices with meals. Keep serving sizes small. No more than 3 cups of milk and 1 cup of juice per day.

**Water is the best choice for a beverage!**
Drink water every day! If you like flavored drinks, try sparkling water or add a few pieces of fruit into your water bottle.
You might consider bringing in some beverages and having your athletes look at the number of grams of sugar in each one. The athletes could count out the number of sugar cubes represented in each drink.

4 grams of sugar = 1 sugar cube

-How does it make you feel knowing that there are 10 teaspoons of sugar in a can of Coke?
-Do sports drinks like Gatorade have sugar in them? TV ads don’t tell you that, do they?
EXERCISE- Endurance & Strength: You can become a better athlete by enjoying physical activity outside of your sports practice. There are many ways to be physically active. Certain exercises can help you improve the skills needed for your sport. **Your goal is to do at least 5 days of exercise every week!**

**Types of Exercise:** ENDURANCE STRENGTH FLEXIBILITY BALANCE

Endurance is the ability of your body to keep moving for long periods of time. Endurance can help you run farther distances without stopping and practice longer with fewer breaks.

Try your favorite endurance exercise for 30 minutes, 5 days each week.
**Strength**

*Strength is the ability of your body to do work.* Strength gives you the ability to jump higher, throw farther, and sprint faster.

**Try to complete a workout for the entire body, 2-3 days each week.**

-Is dancing exercise? (Yes, endurance.)
-Running, biking, and swimming are examples of what type of exercise? (Endurance)
-Push-ups and sit-ups are what kind of exercise? (Strength)
-What exercise do you do for endurance? Strength?

**Practice Week #7 Discussion: EXERCISE- Flexibility & Balance:**

**Flexibility** is the ability of your body to move easily in all directions. Being flexible makes it easier to do sports skills and helps prevent injuries to your muscles and joints!

**Balance** is the ability of your body to stay upright or stay in control of your movements. Balance helps you to stay in control when you are playing sports and helps you to avoid falls.
Flexibility is the ability of your body to move easily in all directions. Being flexible makes it easier to do sports skills and helps prevent injuries to your muscles and joints!

Try to complete a stretch for all body parts, 2-3 days each week!

Balance is the ability of your body to stay upright or stay in control of your movements. Balance helps you to stay in control when you are playing sports and helps you to avoid falls.

Try to complete a full body balance workout, 2-3 days each week!
Practice Week #8 Discussion: EXERCISE IS FUN!

**It is easy to get in the right amount of exercise if you make it fun.** Here are some tips to help you stay motivated to reach your Fit 5 goal.

**Exercise with a friend or group!**
- Go on a walk, run, or bike ride with a friend or family member.
- Join a group exercise class.
- Do strength training with a teammate.

**Take the lead at practice!**
- Ask your coach if you can lead some flexibility or strength exercises.
- Teach a friend a new sport.

**Try something new!**
- Try a new group exercise class.
- Walk or run a different route than you normally do.
- Learn a new strength or flexibility exercise.

**Track your improvements!**
- Write a goal on a piece of paper. Post the goal on your wall.
- Keep a log of your exercises so you can see your progress.

Doing exercise together is a fun way to socialize with friends and family.

-How many of you could walk with a friend after school or work? Attend an exercise or fitness class? Bike on a trail? Take a walk with your mom or dad?
-What is a new exercise you would like to try?
-Share your exercise goal with a partner.

The diagrams in this document are from the Special Olympics Fit 5 Guide.

Other resources:

- **NCHPAD.org** This website has lots of health resources for people with disabilities. They have articles, videos, and even workout plans.
- **ChooseMyPlate.org** This website has it all! Learn how many servings of each food group you need, track your eating to see if you are eating healthy, and even find links to healthy recipes.
- **EatRight.org** This website also has loads of nutrition information, healthy recipes, and even a section to find a dietitian in your area.
- **Heart.org** (click on the heading, “Getting Healthy”) The American Heart Association has great resources for leading a healthy lifestyle, including a nutrition center with tons of recipes and cooking videos for heart-healthy recipes.
- **Diabetes.org** (click on the heading, “Food & Fitness”) The American Diabetes Association has lots of great articles for people who have diabetes. There are also many diabetes friendly recipes!
Warm-up
A warm-up period is the first part of every training session or preparation for competition. The warm-up starts slowly and gradually involves all muscles and body parts. In addition to preparing the athlete mentally, warming up also has several physiological benefits.

The importance of a warm-up prior to exercise cannot be overstressed. Warming up raises the body temperature and prepares the muscles, nervous system, tendons, ligaments and cardiovascular system for upcoming stretches and exercises. The chances of injury are greatly reduced by increasing muscle elasticity.

Most skiing exercises work on strengthening the stomach and leg muscles, as well as overall flexibility. Several categories should be considered and incorporated into your fall dry-land training program.

Warming Up:
- Raises body temperature
- Increases metabolic rate
- Increases heart and respiratory rate
- Prepares the muscles and nervous system for exercise

The warm-up is tailored for the activity to follow. Warm-ups consist of active motion leading up to more vigorous motion to elevate heart, respiratory and metabolic rates. The total warm-up period takes at least 25 minutes and immediately precedes the training or competition. A warm-up period will include the following basic sequence and components.

<table>
<thead>
<tr>
<th>Activity</th>
<th>Purpose</th>
<th>Time (minimum)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Slow aerobic walk/ fast walk/run</td>
<td>Heat muscles</td>
<td>5 minutes</td>
</tr>
<tr>
<td>Stretching</td>
<td>Increase range of movement</td>
<td>10 minutes</td>
</tr>
<tr>
<td>Event specific drills</td>
<td>Coordination preparation for training/competition</td>
<td>10 minutes</td>
</tr>
</tbody>
</table>

Aerobic Warm-Up
Activities such as walking, light jogging, walking while doing arm circles, jumping jacks and directed free skiing. In Alpine skiing, many of these exercises can be implemented on snow, at the bottom and/or top of the slope.

Walking
Walking is the first exercise of an athlete’s routine. Athletes begin warming the muscles by walking slowly for 3-5 minutes. This circulates the blood through all the muscles, thus providing them greater flexibility for stretching. The sole objective of the warm-up is to circulate the blood and warm the muscles in preparation for more strenuous activity.

Running
Running is the next exercise in an athlete’s routine. Athletes begin warming the muscles by running slowly for 3-5 minutes. This circulates the blood through all the muscles, thus providing them greater flexibility for stretching. The run starts out slowly, and then gradually increases in speed; however, the athlete never reaches even 50 percent of maximum effort by the end of the run. Remember, the sole objective of this phase of the warm-up is circulating the blood and warming the muscles in preparation for more strenuous activity.
Directed Free Skiing
Directed free skiing allows the athlete to warm up, on snow, by taking several ski runs prior to skill specific training or competition. This circulates the blood through all the muscles, thus providing them greater flexibility for stretching. Again, the sole objective of this phase of the warm-up is circulating the blood and warming the muscles in preparation for more strenuous activity.

Stretching
Stretching is one of the most critical parts of the warm-up and an athlete’s performance. A more flexible muscle is a stronger and healthier muscle. A stronger and healthier muscle responds better to exercise and activities and helps prevent injury. Coaches should encourage a regular stretching routine for all athletes throughout the entire season to maintain flexibility. Please refer to the stretching section for more in-depth information.

Event Specific Drills
Drills are activities designed to teach sport skills. Progressions of learning start at a low ability level, advance to an intermediate level and, finally, reach a high ability level. Encourage each athlete to advance to his/her highest possible level. Drills can be combined with warm-up and lead into specific skill development.

Skills are taught and reinforced through repetition of a small segment of the skill to be performed. Many times, the actions are exaggerated in order to strengthen the muscles that perform the skill. Each coaching session should take the athlete through the entire progression so that he/she is exposed to all of the skills that make up an event.

Specific Warm-up Activities

Dry-land
- Arm circles (small to large, large to small)
- Jumping jacks/ star jumps
- Ring around the pole
- Using poles to help athletes stretch, i.e., range of motion

On-snow (without skis)
- Arm circles (small to large, large to small)
- Jumping jacks/ star jumps
- Ring around the pole
- Using poles to help athletes stretch, i.e., range of motion

**On-snow (with skis)**
- Arm circles (small to large, large to small)
- Using poles to help athletes stretch, i.e., range of motion
- Trunk twists
- Quadriceps stretch with ski up
• Side lunges

• Skating
• Tag games
**Stretching**

Flexibility is critical to an athlete’s optimal performance in both training and competition. Flexibility is achieved through stretching. Stretching follows an easy aerobic jog at the start of a training session or competition.

Begin with an easy stretch to the point of tension, and hold this position for 15-30 seconds until the pull lessens. When the tension eases, slowly move further into the stretch until tension is again felt. Hold this new position for an additional 15 seconds. Each stretch should be repeated four to five times on each side of the body.

It is important to continue to breathe while stretching. As you lean into the stretch, exhale. Once the stretching point is reached, keep inhaling and exhaling while holding the stretch. Stretching should be a part of everyone’s daily life. Regular, daily stretching has been demonstrated to have the following effects:

1. Increase the length of the muscle-tendon unit
2. Increase joint range of motion
3. Reduce muscle tension
4. Develop body awareness
5. Promote increased circulation
6. Make you feel good

Some athletes, such as those with Down Syndrome, may have low muscle tone that makes them appear more flexible. Be careful to not allow these athletes to stretch beyond a normal, safe range. Several stretches are dangerous to perform for all athletes, and should never be part of a safe stretching program. Unsafe stretches include the following and are NOT to be included in any program:

- Neck Backward Bending
- Trunk Backward Bending
- Spinal Roll

Stretching is effective only if the stretch is performed accurately. Athletes need to focus on correct body positioning and alignment. Take the calf stretch, for example. Many athletes do not keep the feet forward, in the direction that they are skiing.
Upper Body

Chest Opener

- With partner, place one hand/arm on your partner
- Turn chest, facing outward, away from your partner
- Feel stretch in chest
- Repeat with other arm

Arm Circles

- Swing arms forward in large circles
- Repeat going forward and backward

Chest Stretch

- Place hands behind head
- Slowly push elbows out away from head, towards the back
- Feel stretch in chest
Special Olympics Alpine Skiing Coaching Guide
Teaching Alpine Skiing Skills

Side Stretch
- Bend to one side with or without hand over head
- Feel stretch in side
- Repeat on other side

Shoulder Stretch
- Take elbow into hand
- Pull to opposite shoulder
- Arm may be straight or bent
- Repeat with other arm

Shoulder Shrugs
- Raise top of shoulder to ear
- Relax shoulders downward
Neck Stretch

- Roll the neck from shoulder to shoulder with chin touching body at all times
- Do not perform full circles as they may hyperextend the neck
- Tell athlete to roll neck to right, center and left. Never have the athlete roll neck backward.
Low Back & Glutes

**Downward Facing Dog**

- Kneel, hands directly under shoulders, knees under hips
- Lift hips until standing on toes
- Drop heels to the ground
- Alternate rising to toes on one leg, while keeping the other foot flat on the ground

**Hip Stretch**

- Stand and place hands on low back
- Push hips forward
- Tilt head back

**Forward Bend**

- Stand, arms outstretched overhead
- Slowly bend at waist
- Bring hands to ankle level without strain
Lower Body

**Calf Stretch**

- Stand facing forward, toes pointed forward
- Place one leg out in front
- Bend forward leg slightly
- Bend ankle of back leg

**Calf Stretch with Bent Knee**

- Same as Calf Stretch but;
- Bend both knees to ease strain

**Standing Hamstring Stretch**

- Place one leg out in front (with partner/coach holding athletes heel, toe pointing up), bending knee of opposite leg with heel flat on ground
- Legs are not locked
- Sit back on your heels

- As your athletes’ flexibility increases, try this stretch, on skis, with the tail of their ski in the snow
Standing Straddle Stretch

- Spread feet shoulder width apart
- Bend forward at hips
- Reach down along the legs toward the ground until you feel the stretch

Stick Groin Stretch

- Stand with feet flat on the ground
- Lean body to one side, bending knee slightly
- Keep opposite leg straight
- Repeat with other leg

Step Ups

- Place one foot onto support, with bent leg
- Push hips in, toward support
Standing Quad Stretch

- Stand with one foot flat on ground
- Bend knee of other leg, reaching foot toward buttock while grasping ankle with hand
- Pull foot directly toward buttock
- Do not twist knee
- Stretch can be done standing alone or balancing with partner or fence/wall
- If pain occurs in knees during stretch and foot is pointing out to the side, point foot back to relieve stress

Standing Hip Flexor with Skis

- Stand with one ski flat on ground and holding on to a partner
- Reach one leg back and put tip of ski into the snow behind you, keeping leg straight
- Push down slightly to feel stretch in Hip Flexor (front of hip)
- Repeat with other leg
- Stretch can be done in ski boots if the athlete does not feel comfortable on skis
Stretching - Quick Reference Guidelines for On and Off Snow

Start Relaxed
Do not begin until athletes are relaxed and muscles are warm

Be Systematic
Start at the top of body and work your way down

Progress from General to Specific
Start general, then move into event specific exercises

Easy Stretching before Developmental
Make slow, progressive stretches
Do not bounce or jerk to stretch farther

Use Variety
Make it fun – use different exercises to work the same muscles

Breathe Naturally
Do not hold your breath – breathe, stay calm and relaxed

Allow for Individual Differences
Athletes start and progress at different levels

Stretch Regularly
Always include time for warm-up and cool-down

Stretch at home
Training Plan with Health and Fitness Elements

**Elements of a safe and successful practice**

- Check area for safety hazards
- Warmup
- Stretching
- Skills practice
- HYDRATE!!!
- Competitive/fun session
- Cool down
- Health and fitness discussion
- Wrap-up and conclusion
- *Elements can be added and subtracted, as desired*

**1.25 hour practice plan example**

- 8:30-8:40 – Coach arrives and checks area for safety hazards.
- 8:45-8:50 – Walking or jogging to warm-up muscles.
- 8:50-9:00 – Stretching
- 9:00-9:15 – Skills practice
- 9:15-9:20 – Water break
- 9:20-9:30 – Skill practice
- 9:30-9:40 – Competitive/fun session
- 9:40-9:45 – Cool down
- 9:45-10:00 – Health and Fitness Discussion, Wrap-up, and conclusion